

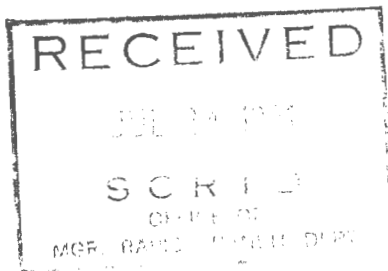


U.S. Department
of Transportation
**Urban Mass
Transportation
Administration**

An Analysis of the U.S. Market for Automated Guideway Transit

Volume 3: A Case Study of Consumer Attitudes

Office of Socio-Economic
Research and Special Projects
Washington, D.C.



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Vo. UMTA-IT-06-0165-79-4 November 1980

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16. Abstract Results of a consumer survey are presented which examine individual attitudes toward automated guideway transit (AGT), both overall and in comparison with other modes of public transportation. These data can assist in the evaluation, design and implementation of proposed AGT systems, and have been developed as one part of a broader AGT market analysis. A two-phase survey consisting of an exploratory phase (six group depth interviews) and a quantitative phase (approximately 550 personal interviews) was conducted. Consumer transportation preferences are reported in terms of the importance attached to selected features (i.e., transit mode, price, travel time, frequency of service) and to the most desired levels of these features (i.e., time intervals for service--5 minutes, 15 minutes, etc.). Factors such as system location, vehicle size, vehicle reliability, driver/station attendants, station location, and seat guarantee are addressed. These factors are examined by four purpose/destination segments (work and non-work travel/downtown and suburban areas) and the socioeconomic and demographic characteristics of survey participants. The survey reveals that AGT is not, in and of itself, preferred over rail, express bus or local bus. However, an AGT system which incorporates a sufficient number of highly valued transit features (i.e., reduced travel time, increased frequency of service and a somewhat lower price) is likely to obtain widespread usage.			
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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol When You Know Multiply by To Find Symbol

LENGTH

in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km

AREA

in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha

MASS (weight)

oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t

VOLUME

teaspoon	teaspoons	5	milliliters	ml
tablespoon	tablespoons	15	milliliters	ml
fluid ounce	fluid ounces	30	milliliters	ml
cup	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³

TEMPERATURE (exact)

Fahrenheit temperature	5/9 (then subtracting 32)	Celsius temperature	°C
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Approximate Conversions from Metric Measures

Symbol When You Know Multiply by To Find Symbol

LENGTH

mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
km	kilometers	1.1	yards	yd
		0.6	miles	mi

AREA

cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
km ²	square kilometers	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.6	acres	

MASS (weight)

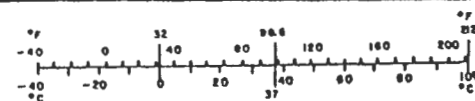
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	

VOLUME

ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	35	cubic feet	ft ³
m ³	cubic meters	1.3	cubic yards	yd ³

TEMPERATURE (exact)

°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature
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AN ANALYSIS OF THE US MARKET FOR
AUTOMATED GUIDEWAY TRANSIT

VOLUME III--A Case Study of Consumer Attitudes

Final Report

Prepared for

US Department of Transportation
Urban Mass Transportation Administration
Washington, DC

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by

National Analysts
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400 Market Street
Philadelphia, Pennsylvania 19106

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238 Main Street
Cambridge, Massachusetts 02142

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PREFACE

This study was funded by the U.S. Department of Transportation, Urban Mass Transportation Administration (UMTA), AGT Socio-Economic Research Program. The project was performed by Cambridge Systematics, Inc., with subcontract support provided by National Analysts and Skidmore, Owings & Merrill. The members of the study team wish to thank Howard Evoy, the project monitor, Robert McCown and Ron Nawrocki of UMTA for their support and assistance throughout the effort.

This particular report represents one part of a larger project to determine where and under what conditions automated guideway transit (AGT) will provide cost-effective service that satisfies urban area travel desires. Other activities undertaken include:

- eleven site-specific alternatives analyses within three representative urban areas, reported on in Volume II; and
- a national markets estimate based on data from 46 urban areas to identify a target implementation potential, reported on in Volume I.

In addition, an aesthetics handbook has been developed to provide guidance to architects, engineers and planners who are concerned with aesthetic issues of elevated AGT systems.

The investigation of consumer attitudes toward automated guideway transit and other modes of public transportation was performed by the Social Science Department of National Analysts. George A. Kocur of Cambridge Systematics served as director of the project and was responsible for the overall direction and management of the work performed as well as contributing specifically to the development of this volume.

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I. INTRODUCTION

A. Background

The Socio-Economic Research Program within UMTA's Office of Technology, Development and Deployment is investigating various aspects of Automated Guideway Transit (AGT) systems, including performance, economics, safety, environmental impact, aesthetics and public opinion. These topics are being examined in detail within several project areas of the AGT Socio-Economic Research Program, e.g., Generic Alternatives Analysis (Activity A), Markets (Activity D), and Communications (Activity E).

The AGT Socio-Economic Research Program is one of the four major components of the UMTA Integrated AGT Program. These four components are:

- AGT Socio-Economic Research Program
- AGT Technology Program
- Advanced GRT (Group Rapid Transit) Program
- Downtown People Mover Program

The survey results presented in this report are a part of the Markets (Activity D) Program, and can provide important input into the ongoing technology and application programs. Specifically, the survey results address the ultimate users' -- i.e., the transit riders' -- preferences, rather than those of transit operators or community officials. The adjustments and modifications of the program suggested by the survey findings are expected to result in an AGT mode alternative which the public will accept and use.

B. Purpose

The purpose of the survey portion of the Markets analysis is to examine consumer attitudes toward AGT, both overall and in comparison with other modes of public transportation. A related objective is the development of a consumer demand (i.e., choice) model more comprehensive than those typically used in transit evaluations to determine how AGT might look and operate from the "consumer" point of view. The ultimate goal is to provide information that will enable transit planners to design and implement an AGT system which riders consider an improvement over other modes of public transit.

Given these objectives, the following types of questions were addressed in this survey: Which type of AGT system is most desirable -- an above ground, below ground or surface system? How do consumers feel about automation? What size vehicle is preferred and why? How frequently should the vehicles run? What should the cost of a ride be to make it preferred over other modes of public transportation? Do consumers require a seat to consider AGT acceptable? And lastly, considerable attention was paid to the question as to whether or not AGT is a mode of transportation which consumers generally feel is at least equal to or better than more conventional modes of transportation, such as buses and trains.

The answers to these questions, it was felt, would vary depending upon the purpose and/or destination of the trip. For example, it was hypothesized that persons using public transportation to get to and from work as opposed to shopping or recreational events might have different transportation needs. Similarly, it may be that persons travelling to the downtown area as compared with those travelling to the outskirts or suburbs around the city might also have different transportation requirements.

A two-phase survey was carefully designed to measure these possible differences. The study design and methodology are described in the following chapter.

II. METHODOLOGY

The research was conducted in two stages: a preliminary, more qualitative phase during which six group depth interviews were conducted and a quantitative survey phase consisting of approximately 550 personal interviews. The purpose of the initial set of interviews was to verify those factors which Phase II would concentrate upon, as well as to test the survey administration procedures which would be used during the second phase.

A. Phase I

The initial phase consisted of six in-depth group interviews with Atlanta area residents, three with men and three with women. The group participants were classified into the following four segments:

- Those who work in the downtown area of the city (1 male, 1 female group)
- Those who work in the outskirts or suburbs around the city (1 male group)
- Those who shop, go to leisure or recreational activities in the downtown area of the city (1 male, 1 female group)
- Those who shop, go to leisure or recreational activities in the outskirts or suburbs around the city (1 female group)

This segmentation insured that those differences in attitudes and behaviors which are related to each of the primary transportation purposes and trip destinations could be effectively tapped.

In each of the group interviews, the respondents represented a cross section of Atlanta area residents by age, race, income and occupation. Public transit users and non-users were represented in those groups dealing with the downtown area of the city. All respondents had an automobile available for use, as well as access to public transportation.

In order to familiarize respondents with AGT and other modes of public transportation, a narrative slide presentation describing each mode was administered at the onset of each group discussion. Respondents were then asked to complete a short, self-administered questionnaire which included the conjoint rating task.* This was followed by a detailed one and one-half hour discussion of the slide presentation and materials along with a "qualitative" in-depth look at AGT and the three other modes of public transportation -- rail, local bus and express bus. The sessions were led by a trained psychologist moderator and tape recorded for subsequent analysis.

Insights gleaned from this phase are presented in the report, "Consumer Attitudes Toward Alternative Transit Modes and Features," June, 1978. In addition to suggestions for improving the materials, the report focuses on consumers' perceptions of the advantages and disadvantages of Automated Guideway Transit and other modes. Emphasis is placed upon the most salient AGT development issues-- location of guideways (above, below or surface level), vehicle size (personal 4 to 6 passenger vehicles versus large, impersonal 50 passenger vehicles), automation (drivers or attendants on vehicles versus a fully-automated system) and the like.

*Eight questionnaire versions were tested to determine which question wording in the conjoint task was easier, clearer, and better understood. No more than nine questionnaires of any one version were administered.

B. Phase II

The quantitative survey, the findings of which are presented in this report, consisted of 549 personal interviews with Atlanta area residents who were pre-screened by telephone to determine their eligibility and willingness to cooperate in the personal interview. The procedures by which respondents were selected and the data collected are described on the following pages along with the development of the survey documents and analysis steps.

1. Description of the sample

Respondents were selected from Atlanta metropolitan area residents 18 years of age or older.* The sampling approach for this phase relied upon a stratified quota sample in which pre-defined numbers of respondents are recruited in a series of categories. Similar to Phase I, the four categories and their target sample sizes were:

1. Work/downtown	180
2. Work/suburban	90
3. Nonwork/downtown	180
4. Nonwork/suburban	90

Group 1 was further broken into a transit user and auto user group, for which 90 respondents each were desired.**

*Atlanta was chosen from among three sites (Dallas, Chicago, Atlanta) where other aspects of the Market Analysis Program Activity were being performed. The latter was selected because it is a relatively new and untapped "public transportation area." Atlanta area residents' familiarity with rail, AGT, and express bus systems was considered more limited than that of residents of Chicago or Dallas where these types of systems have been operating for some time. It was felt that survey respondents in Atlanta would bring a fresh look and an open mind to the survey, rather than a view of "what they know or are used to seeing."

**The most recent Census publication on workers' transportation modes to and from work in the Atlanta area indicates that out of 594,000 workers who use some vehicle to get to work, approximately 55,000 (9%) use public transit.

In the remaining three strata, every attempt was made to interview both transit and non-transit users. It should be noted, however, that transit users for suburban trips, either to work, to shop or for leisure, constitute a very small, almost negligible group in the Atlanta area. These factors account for the varying number of interviews targeted for the different strata.

Respondents were recruited by telephone dialing from the entire Atlanta area, with several screening questions asked to determine the group to which they belonged. If they were members of a group in which more respondents were needed and if they agreed to the personal interview, they became part of the sample. All respondents had a car available for use as well as public transit to better facilitate administration of the conjoint rating task.

This quota sample is not intended to be representative of Atlanta as a whole. This is obvious, for two-thirds of the trips in our sample are downtown-oriented, while only about 10% of all Atlanta trips are downtown-oriented. Rather, the quota sample is intended to explore the four major markets in-depth. The survey results must therefore be applied by market to obtain valid conclusions.

The 549 interviews obtained in this phase were distributed among the four sample strata as follows:

<u>Stratum Identification</u>	<u># of Interviews</u>
1. Work/downtown	177
Auto	91
Bus	84*
2. Work/suburban	99
3. Non-work/downtown	168
4. Non-work/suburban	105

In selecting survey participants, careful attention was paid to obtaining a cross-section of persons residing in the area by age, income, and race. This enabled analysis of the data to be carried out by socio-economic and demographic characteristics within the sampled universe. It also provided a representative picture of AGT's potential market (i.e., the most interested consumer segments) based on the results of the conjoint measurement rating task.

The demographic breakdown of the sample is summarized below. Table II-1 presents the data from which this summary is drawn, as well as the demographic breakdown of each of the Purpose/Destination strata.

- Approximately half (54%) of the sample are female; 46% are male
- More respondents fall into the 18 to 34 years old category (41%) than into any other age group. Over a third of the sample (36%) are between the ages of 35 and 49, and the remainder (23%) are 50 years of age or older

*Two additional interviews were obtained within the work/downtown stratum from persons who use an automobile and bus with equal frequency.

- Respondents were fairly evenly distributed among three income levels: 31% had before tax household incomes of less than \$15,000; 36% had before tax household incomes of \$15,000 to \$24,999; and 33% had before tax household incomes of \$25,000 or more
- 87% of the respondents are white
- Over three-fourths (77%) of the sample have had at least one year of college education. In fact, 38% have either completed college or done graduate work
- Over one-fourth (28%) of those interviewed claim to have either professional or technical occupations. The next largest group of respondents are clerical or sales workers (26%). One-fifth are homemakers, students, in the military, or retired and 15% are managers, officers or proprietors. The remaining 11% are craftsmen, operatives, or service workers
- The average number of persons per household is 3.3

No noticeable differences exist among respondents in the four Purpose/Destination strata with the exception of those in the non-work/suburban group. The latter contains slightly more women, persons who are older and tend to have higher household incomes as compared to the total sample.

2. Survey instrument design

In order to meet the objectives of this study, four questionnaire versions were prepared for the personal interview which probed respondents' preferences, attitudes and behaviors relevant to public transportation. Each version was tailored to one of the four different trip Purpose/Destination strata identified earlier. The questionnaire versions administered for each stratum and the form developed for use in the telephone screening can be found in Appendix B.

Table II-1

DEMOGRAPHIC DESCRIPTION OF SAMPLE*

	<u>Total</u> %	<u>Work/ Downtown</u> %	<u>Work/ Suburban</u> %	<u>Non-work/ Downtown</u> %	<u>Non-work/ Suburban</u> %
<u>Sex</u>					
Male	46	45	48	49	41
Female	54	55	52	51	59
<u>Age</u>					
18 to 34	41	45	44	40	34
35 to 49	36	33	32	40	38
50 and over	23	22	23	21	28
<u>Income</u>					
Under \$15,000	31	36	24	29	32
\$15,000 to \$24,999	36	36	38	41	30
\$25,000 and over	33	28	39	31	39
<u>Race</u>					
White	86	80	95	85	89
Black/other	14	20	5	15	10
<u>Education</u>					
Completed high school or less	23	25	28	19	21
Some college	39	35	37	42	45
Graduated college or beyond	38	40	34	39	34

(continued)

Table II-1

(Continued)

<u>Occupation</u>	<u>Total</u> %	<u>Work/ Downtown</u> %	<u>Work/ Suburban</u> %	<u>Non-work Downtown</u> %	<u>Non-work Suburban</u> %
Professional and technical	28	28	41	25	18
Managers, officers, proprietors	15	24	10	15	3
Farmers	-	-	-	-	-
Clerical or sales worker	26	39	26	20	12
Craftsmen and foremen	5	2	9	6	6
Operatives	2	2	6	1	1
Service workers or other similar jobs	4	3	6	3	5
Not in civilian labor force (e.g., homemaker, student, retired, military service)	20	1	1	30	54
<u>Size of Household</u>					
1 person	10	14	11	5	10
2 people	22	27	17	20	24
3 people	20	25	16	23	12
4 people	28	18	31	32	32
5 or more people	20	16	24	20	21
Mean =	3.3	3.0	3.5	3.5	3.6
	N = (549)	(177)	(99)	(168)	(105)

*Percentages in some columns do not add to 100% due to rounding.

Consumer preferences relevant to transportation were measured primarily via the use of a conjoint measurement (or rating) approach. Conjoint measurement is a technique which permits the evaluation of consumer preferences for various forms of a product or service. Respondents' ratings of alternative product descriptions are then analyzed in order to provide the answers to several types of questions.

- What attributes of a product or service are more important in the consumer's choice of one product or service over another?
- What utility or value does the consumer derive from different amounts of each attribute that make up a product?
- How does the consumer trade off the utility he derives from one attribute for the utility of another attribute?

The procedure developed for the administration of this technique is discussed in detail in this section. The analytical means by which the answers to these key questions were obtained is described in the "Data Analysis" portion following.

The first step in the design of the conjoint rating portion of the questionnaire was to identify the most salient attributes of the modes of public transportation under consideration, such as frequency of service, price, size of vehicle, seat availability, station location and the like.

The second step in the design of the conjoint rating portion of the study was to specify the relevant dimensions that each attribute may take on in reality. Each attribute was thought of as either a continuum with various levels (e.g., price), or as a set of qualitatively different categories that are either

absent or present (e.g., a rail vehicle, bus or AGT vehicle). It was essential that any of the modes of public transportation that currently exist, or are likely to be produced, can be represented by some combination of the attribute levels or categories. It was also necessary that each level of each attribute be unambiguously defined in a way that is understandable to consumers. The findings of Phase I contributed substantially to the attribute and level selection and definitions. The complete listing of all attributes and levels in the conjoint model is presented in Figure II-1 (Transit Features Card).

The third step in the design of the conjoint rating portion of this study was to develop a manageable set of product descriptions for respondent rating. Based upon the model's attributes and levels, the full number of situations would be 8,192, given by the expression, $4^5 \cdot 2^3$, reflecting the presence of five variables at four levels each and three variables at two levels each (see Figure II-1). An experiment using all 8,192 combinations is called a full factorial plan, and requires no assumptions at all about the underlying nature of peoples' responses to these variables. However, if it can be assumed that some or all interactions among variables are negligible, there exist fractional factorial designs which allow the estimation of the remaining coefficients far more efficiently. In fact, if it is assumed that no interactions exist among the nine variables, but that their effects on individual preferences are strictly additive, a fractional factorial with only 32 combinations exists which can serve to estimate all of the coefficients.

Figure II-1

CONJOINT MEASUREMENT MODEL

TRANSIT FEATURES CARDTRANSIT MODE

Rail
Local Bus
Express Bus
AGT

FREQUENCY OF SERVICE

On demand - every 5 minutes
Every 15 minutes
Every 30 minutes
Every 45 minutes

VEHICLE SIZE

4 to 6 passengers
10 passengers
30 passengers
50 passengers

TRAVEL TIME-DIFFERENCE FROM AUTO

15 minutes less
Same
15 minutes more
30 minutes more

PRICE-DIFFERENCE FROM AUTO

\$ 1.00 less
\$.50 less
Same
\$.50 more

SEAT GUARANTEE

100% guaranteed
50% guaranteed

DISTANCE TO STATION/BUS STOP FROM HOME

One block
Four blocks

DISTANCE TO DESTINATION FROM STATION/
BUS STOP OF ARRIVAL

One block
Four blocks

The issue of interaction effects can be demonstrated by a two-variable example. If the two variables are x and y , and "likelihood of use," the dependent variable, is L , then the general model with interactions would be:*

$$L = \alpha_0 + \alpha_1 x + \alpha_2 y + \alpha_3 xy + \alpha_4 xy + \dots$$

By assuming no interactions the model becomes:

$$L = \alpha_0 + \alpha_1 x + \alpha_2 y$$

This is a much simpler model, one which can be administered to respondents, and it was felt to be appropriate for this level of analysis into the rather broad issues surrounding AGT use in urban settings. Of course, there are interactions in the real world (e.g., the fare you are willing to pay depends on how fast the transit service is, etc.), but the simpler form provides a useful first level of analysis.

The fractional factorial design chosen is an orthogonal design, with every variable independent of every other variable in the experiment (assuming that interaction effects are negligible). This independence simplifies the data analysis and yields more information from a given number of responses than if the situations were correlated.

Accordingly, via the application of the fractional factorial design, a subset of 32 combinations was selected. Given the assumption of additivity, the ratings for all possible combinations then could be derived from the ratings of the 32 product combinations presented.

The 32 transportation product descriptions were made into "sort cards" and instructions developed to explain how the cards were to be rated. A five point rating scale ranging from "Least Likely to Use" to "Most Likely to Use" was selected. A "sort board"

*The length of the series is determined by the number of levels of the variables.

along which respondents could physically place each card, in its perceived rating position, was developed for this task. A sample sort card is presented in Figure II-2, and all 32 cards presented to respondents are included in Appendix B of this report.

Consumer reaction to variables which either were not included in the conjoint rating scheme or which warranted further investigation, as well as current transportation patterns, rounded out the questionnaire.

3. Data collection

A telephone screening was conducted with potential respondents to identify whether or not they fit into one of the four sample strata, and thus, were qualified for the personal interview. Those that were eligible were invited to participate in the personal interview at a central interviewing facility.

Interviewing was conducted with groups of six to eight respondents. Each group consisted of members of the same trip Purpose/Destination stratum, who thus were presented with identical questionnaires.

Respondents were seated at individual tables, upon which the following survey materials were placed:

- Questionnaire
- Transit Features card

Figure II-2
SAMPLE SORT CARD

CARD 7

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

- Sort board
- 32 sort cards, divided into two shuffled sets of 16 cards each

Once assembled and seated, respondents completed the title page of the questionnaire and read the introduction to the survey and description of the rating task. Following this, each feature on the Transit Features card was described to the respondents by means of the interviewer script (see Appendix B) and the slide presentation of the four transit modes.

Respondents were then instructed to return the Transit Features card and directed to complete the self-administered questionnaire. Respondents rated one set of cards at the beginning of the questionnaire, and performed the second rating task after completing the intervening demographic questions.

Interviewers assisted respondents in recording their ratings for the conjoint portions of the interview, and insured that all respondents answered each question fully and accurately. In particular, interviewers probed the responses to the open-ended items included in the questionnaire.

The sequence by which data collection proceeded is summarized in Figure II-3.

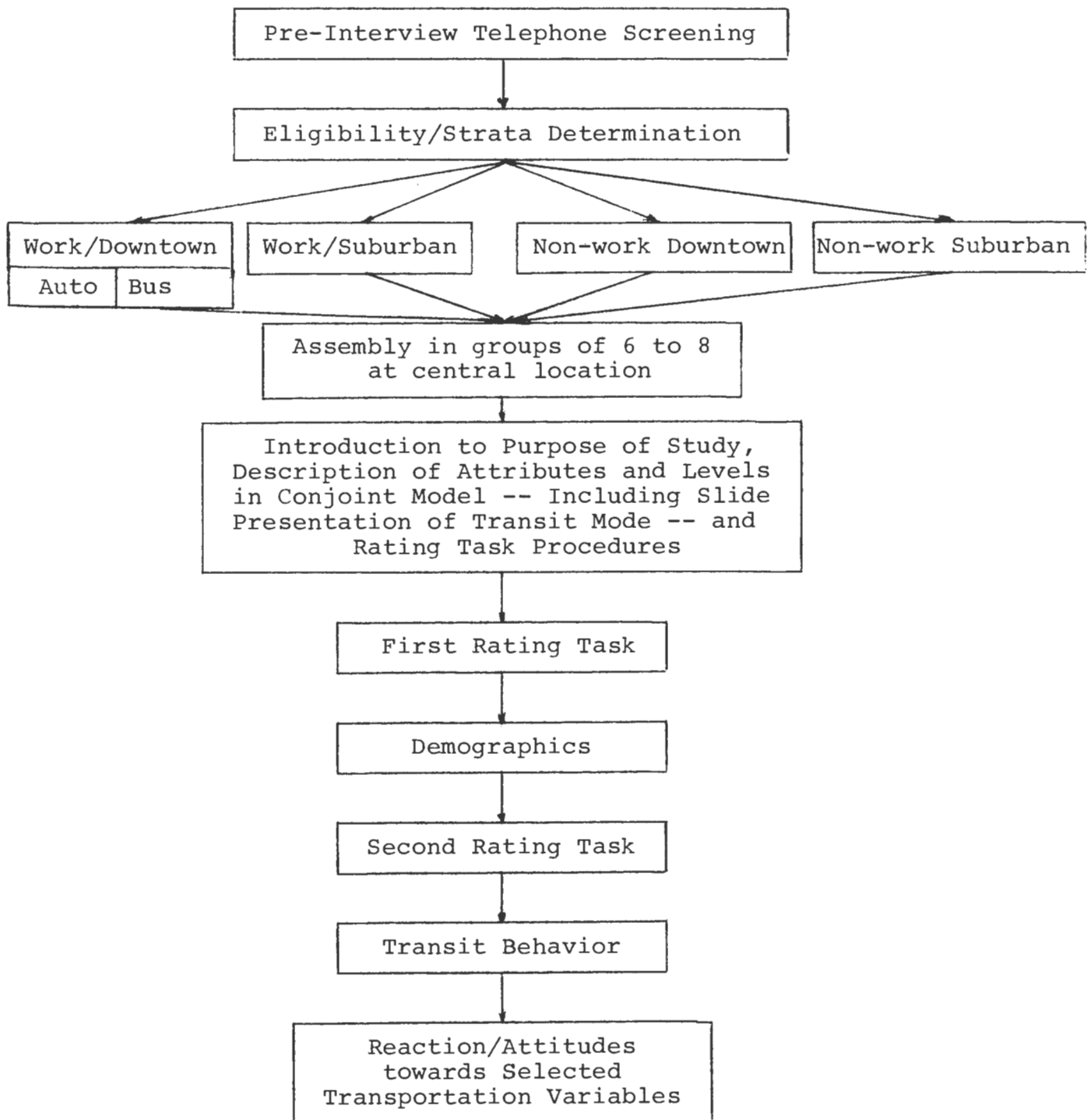
Interviews averaged 30 minutes in length, for which respondents were paid an honorarium.

4. Data analysis

Conjoint measurement analysis has two primary components, each of which is described below. In this study, analysis was first performed at the individual level (that is, each step was performed separately for each respondent). The results were then averaged for the total sample and for key sub-groups (such as Purpose/Destination strata) in order to permit an overview of the results and inter-group comparison.

Figure II-3

SEQUENCE OF DATA COLLECTION



- The first step is estimation of the utility score for each level of each attribute. This step answers the question:

"What utility does the consumer derive from different amounts of each attribute that make up a product or service?"

Utilities should be interpreted as an adjusted score on the "Likelihood of Use" scale when the influences of all other product attributes in the model have been controlled.* The "likelihood of use" is the dependent variable in the analysis, the variables in the fractional factorial being the explanatory or independent variables. Each individual's coded responses to the 32 product situations form the conjoint data set for each respondent. The average of the coded responses across all individuals in a market form the aggregate conjoint data set for each market.

Utility values have the properties of an interval scale, and, therefore, must be interpreted relative to each other rather than as absolutes. This approach is consistent with marketing practice and transportation planning analysis which assumes cardinal utility in its demand models. The data could have been analyzed through a non-metric technique (e.g., MONONOVA). However, all available techniques (non-metric, regression, and ANOVA) give essentially the same coefficients.

The numerical scale values are included in the presentation of the results of this analysis to facilitate comparisons of utility differences for various factors, and it is this type of comparison which answers the question:

"How does the consumer trade-off the utility he derives from one attribute for the utility of another attribute?"

*Likelihood of use and utility are used interchangeably in the presentation of the results of this analysis (Chapter III) to represent the scale of consumer preferences.

For example: If the difference of the utilities associated with a vehicle size of 30 passengers versus a vehicle size of 50 passengers were less than the difference in the utilities associated with seat guarantees of 100% and 50%, it can be inferred that consumers are willing to trade-off vehicle size in favor of seat guarantee.

There then remains the question of the relationship of the stated likelihoods of transit use obtained in the survey with the actual likelihood of use that exists (or would exist, in the case of some of the situations which do not currently exist). While this issue is a difficult one, it should be noted that the coefficients that emerge from the conjoint model are very similar to coefficients of disaggregate demand models. Although this work is not reported in this study, if one were to normalize the changes in likelihood of use per minute of change of travel time, or cents of change of cost, one could compute trade-off rates for time, cost, and other variables. These are close to the values reported in many disaggregate models, and thus offer some support that the stated likelihoods of transit use bear some consistent relationship to actual use.

- The second step is estimation of the relative importance of each attribute. This step answers the question:

"What attributes of a product or service are more important in the consumer's choice of one product or service over another?"

Relative importance of an attribute is defined as the ratio of the utility range for that attribute (highest minus lowest utility) to the sum of the ranges for all attributes. It is, therefore, a measure of the part-worth of that attribute to the overall utility attached to the product by consumers.

The calculation of the relative importance weights can be performed at the aggregate level (i.e., based on average utilities) or at the individual level (i.e., based on each person's utilities) and then averaged across the sample. The aggregate approach summarizes the decision process of the average consumer. The individual level approach captures individual differences in preferences for specific levels.

If there is a natural preference ordering to the levels of a particular attribute (e.g., price, where most people prefer lower to higher levels), then both approaches reflect essentially the same utility range from the most preferred to least liked feature. (The percent importance weights may differ, however, due to relative changes in the importance of other attributes.) Attributes that have no natural ordering (e.g., mode) often have substantially different importances depending upon the approach employed. The reason for this is that the different preference orderings people have for these attribute levels may tend to cancel out in the average utilities. This would yield relatively low importances but may mask substantial individual variations in utilities. In order to capture these variations, the individual level analytical approach was selected for this study.

In addition to the conjoint analysis, all interview responses were cross-tabulated by Purpose/Destination strata, sex, age, race and income. The findings of the conjoint analysis and cross-tabulations are presented in the remaining chapters; significance tests, however, are not presented. Current practice in conjoint measurement research is to accept the individual utility values as point estimates of respondents' true utility functions. Reliability of these estimates is evaluated by the R^2 statistic which is calculated as part of the analysis. These measures of goodness of fit of the individual respondents' estimated utility functions proved to be sufficiently high to justify use of the point estimates.

III. CONSUMER TRANSPORTATION PREFERENCES

This chapter presents the results of the conjoint analysis. These findings are supplemented with discussions of consumer-related topics, so as to provide a comprehensive picture of consumer transportation preferences.

Each factor relating to the use of public transit is considered separately in the order of that factor's overall importance (derived from the conjoint analysis.) The reader is advised that any mention of the preferred factor or most important factor must be qualified with the statement "based upon the factors and levels of factors considered in this research." A different selection of factors or levels within factors would lead to different results. The primary emphasis of this section is the utility differences among attribute levels averaged across the entire sample. Subgroup differences are cited only where they are especially large. The documentation of the utility scores for each factor (Table III-11) is presented at the conclusion of the discussion of all attributes in order to facilitate cross-reference.

Following the presentation of factor utilities is a summary review of the relative importance, based on the conjoint analysis, of the factors. This, in turn, is followed by a comparative discussion of the merits of single attribute versus conjoint measurement approaches to importance ratings.

A. Utilities of the Factors Involved in the Selection of Public Transit

1. Transit mode

Transit mode (rail, local bus, express bus, AGT) is the most important factor of those considered in the conjoint analysis. On the average, rail and express bus have the

highest utility, followed by AGT and local bus (Figure III-1). The magnitudes of the differences between modes are small, indicating that on the average, the transit users in the sample rated the four modes about equally. However, the importance of this factor is dictated by the fact that distinct segments of consumers prefer each of the four modes.

The type of trip to be taken (as reflected in the questionnaire versions) has a minimal impact on the utilities of the four transit modes. One small difference which is worth noting is that for a suburban work trip, AGT is the preferred mode, on the average. (Figure III-1 and Table III-11)

Comparison of key demographic segments reveals that:

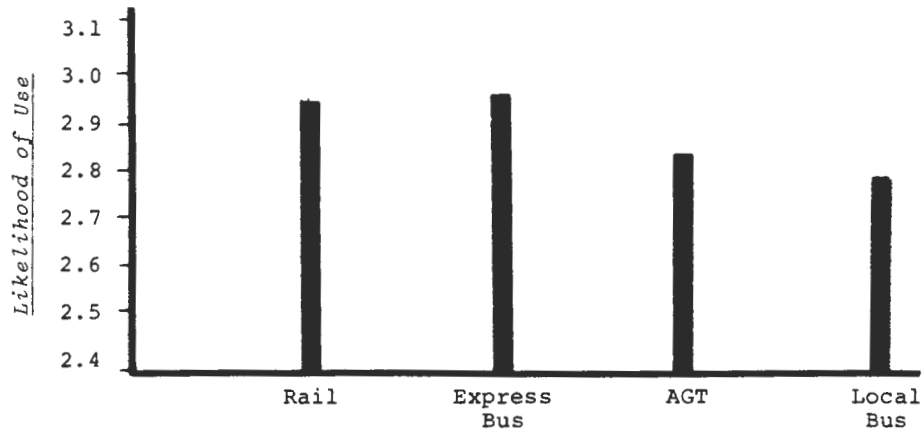
- Local bus is preferred more by non-whites and by lower income users than by whites and middle and upper income riders
- Men derive greater utility from AGT than do women

These rank orders derived from the conjoint analysis of transit mode choice are generally replicated by the responses to the final questionnaire item, in which respondents were asked to indicate which of the four public transit modes they most preferred. In this instance, 45% of the sample indicated a preference for rail, 22% for AGT, 20% for express bus, and 13% for local bus.

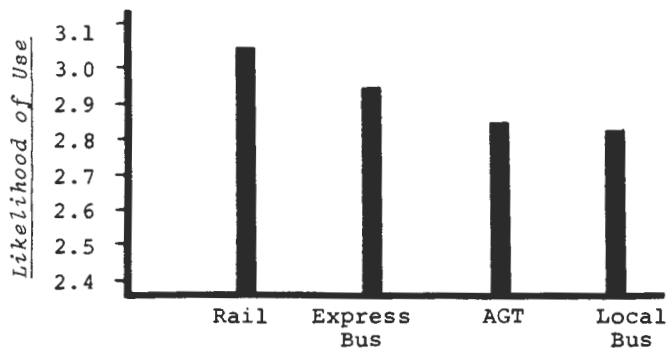
Some variation in the mode preferences registered by this question is apparent across the various Purpose/Destination strata (Table III-1). Among the Work/Downtown stratum, persons who primarily ride the bus for this Purpose/Destination are more likely to prefer express bus (29%) and less likely to prefer AGT (11%) than is the norm. The reverse

Figure III-1

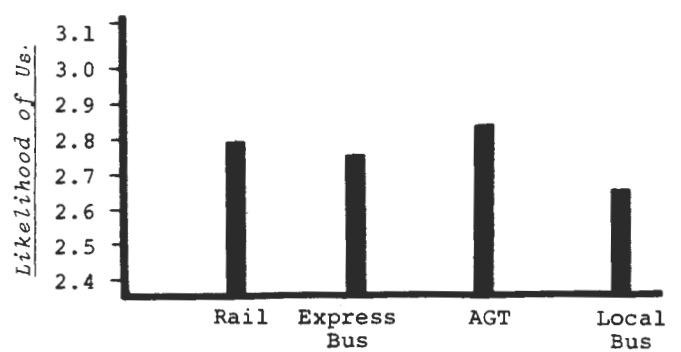
TRANSIT MODE



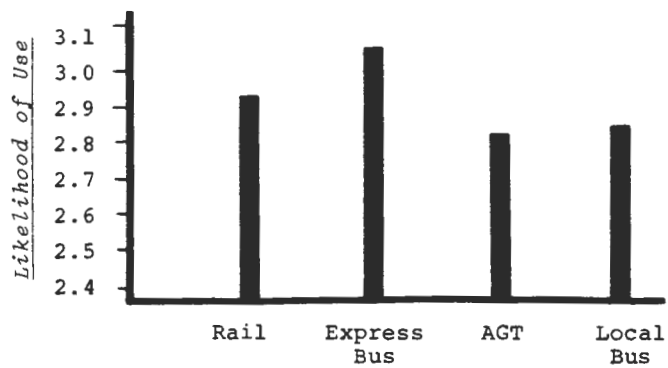
Version I
Work/Downtown
Transit Mode



Version II
Work/Suburban
Transit Mode



Version III
Non-work/Downtown
Transit Mode



Version IV
Non-work/Suburban
Transit Mode

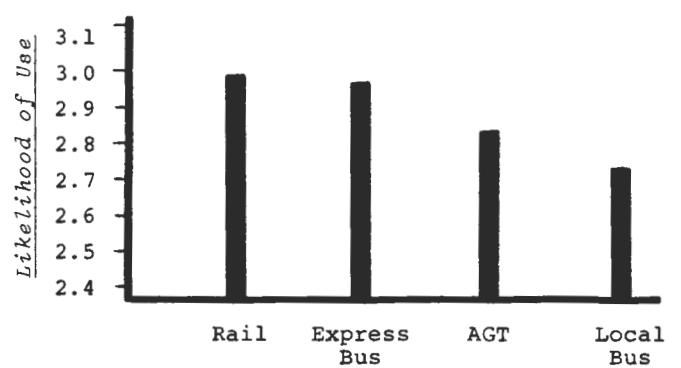


Table III-1

TRANSIT MODE PREFERRED BY PURPOSE/DESTINATION STRATA

Percent reporting that they most prefer:	Work/Downtown				Work/ Suburban	Non-work/ Downtown	Non-work/ Suburban
	<u>Total</u> %	<u>Total</u> %	<u>Bus</u> <u>Users</u> %	<u>Car</u> <u>Users</u> %			
Rail	45	49	49	50	44	38	50
Local bus	13	14	16	13	10	15	12
Express bus	20	19	29	11	14	25	18
AGT	22	18	11	25	30	22	20
Don't know	*	-	-	-	1	-	-
N =	(549)	(177)	(84)	(91)	(99)	(168)	(105)

*Indicates a percentage less than .5%

is true for the members of this segment who most often drive a car to their downtown worksite. Individuals within the Work/Suburban stratum are similar to the car users within the Work/Downtown segment with regard to their more pronounced mode preferences (30% prefer AGT and 14% prefer express bus versus 22% and 20% for the total sample). Insofar as the majority of Atlanta residents working in the suburbs use automobiles to reach their suburban worksite, this alignment with the Work/Downtown car users is not unexpected. For leisure-oriented trips, it is noteworthy that 38% of the Non-work/Downtown segment prefer rail transit while 50% of the Non-work/Suburban segment note this same preference.

Membership in several of the demographic segments investigated in this survey is also related to the transit preferences registered by this question (Table III-2). As was found in the conjoint analysis, non-whites and persons with lower incomes are more likely to prefer local bus than is the norm (35% and 23%, respectively, versus 13% for the total sample). In addition, persons 18 to 34 years of age and those at least 50 years old are somewhat more likely to express a preference for local bus than are those in the median age grouping (with 16%, 19% and 7%, respectively, noting this preference). This same pattern is apparent, to a lesser extent, in the utilities derived from the conjoint analysis. (Table III-11)

Those persons falling into the median age category tend most often to prefer rail transit (52%, compared with 42% within the 18 to 34 age grouping and 46% of the persons 50 years of age or older). Income also plays a role in rail preferences; the percent selecting rail as the preferred transit mode increases as income rises (38% of the lower income group prefers rail, while 53% of the highest income group notes this choice). These patterns related to rail choice were not revealed in the relative utilities derived from the conjoint analysis.

AGT tends to have a greater appeal for whites, men, younger persons and those in the middle income bracket. This is in keeping with the conjoint findings.

Table III-2

TRANSIT MODE PREFERRED
BY DEMOGRAPHIC SEGMENTS

Percent reporting that they most prefer:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
Rail	45	47	43	42	52	39	46	37	38	42	53
Local bus	13	10	16	16	7	19	10	35	23	13	6
Express bus	20	19	20	18	20	23	21	15	20	20	19
AGT	22	24	20	25	20	19	23	13	19	25	22
Don't know	*	*	-	-	1	-	*	-	-	1	-
	N = (549)	(252)	(297)	(225)	(197)	(126)	(471)	(78)	(167)	(198)	(179)

27.

*Indicates a percentage less than .5%

In a separate question, consumers were asked to rate the perceived reliability (i.e., potential for meeting time schedules, possible breakdowns, etc.) of each of the four modes of public transportation investigated in this survey. A five-point scale was used for this rating, with "1" indicating "very unreliable" and "5" denoting "very reliable." Rail (the average rating for which is 4.2) is viewed as the most dependable transit mode. AGT and express bus are also judged to be generally reliable, with average ratings of 3.9 and 3.8, respectively. Local bus is considered the least reliable transit alternative, although its accorded rating of 3.2 indicates that it is, nonetheless, thought to be fairly dependable. These ratings are fairly uniform across each of the Purpose/Destination strata, although within the Work/Downtown segment, bus users accord more elevated ratings to bus and express bus than do the car users within this segment. (Table III-3)

Demographic variables are associated with these mode-reliability ratings to a fairly large extent. Most notably, the perception that the three most common modes (rail, express bus, and local bus) are reliable increases with age (Table III-4). Substantial variation in the ratings granted by whites and non-whites are also apparent. Whites tend more often to judge that the rail and AGT modes are reliable, while non-whites tend more often to view express and local bus systems as reliable. Income is a key factor only for local bus, for which reliability ratings rise as income decreases.

In order to assess the extent to which automation might impact upon the consumer's view of public transit, respondents were asked to indicate the functions, other than driving, which they feel are included in the role of driver/attendant of public transit vehicles. The responses to this question reveal that drivers/attendants are perceived as having three primary adjunct duties (Table III-5). These three are information provision, contribution

Table III-3

MEAN RATINGS* OF RELIABILITY OF PUBLIC TRANSPORTATION
BY PURPOSE/DESTINATION STRATA

Public transportation mode rated for reliability:	Total	Work/Downtown			Work/ Suburban	Non-work/ Downtown	Non-work/ Suburban
		Total	Bus Users	Car Users			
Rail	4.18	4.31	4.24	4.36	4.23	4.02	4.20
AGT	3.89	3.94	3.84	4.01	3.99	3.80	3.86
Express bus	3.80	3.82	4.04	3.62	3.80	3.72	3.90
Local bus	3.15	3.18	3.39	3.00	3.11	3.10	3.21
N =	(544)	(173)	(83)	(88)	(99)	(168)	(104)

*Based on 5-point rating scale where "1" = "very unreliable" and "5" = "very reliable"

Table III-4

MEAN RATINGS* OF RELIABILITY
OF PUBLIC TRANSPORTATION
BY DEMOGRAPHIC SEGMENTS

Public transportation mode rate for reliability:	Total	Sex		Age			Race		Income		
		Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
Rail	4.18	4.18	4.19	4.06	4.23	4.32	4.22	3.96	4.19	4.11	4.25
AGT	3.89	3.96	3.83	3.92	3.85	3.91	3.96	3.49	3.84	3.77	4.06
Express bus	3.80	3.80	3.80	3.68	3.83	3.98	3.76	4.04	3.90	3.72	3.29 ³⁰
Local bus	3.15	3.04	3.24	3.05	3.14	3.33	3.03	3.87	3.40	3.16	2.91
N =	(544)	(250)	(294)	(223)	(194)	(124)	(468)	(76)	(167)	(195)	(178)

*Based on a 5-point scale where "1" equals "very unreliable" and "5" equals "very reliable"

Table III-5

FUNCTIONS OTHER THAN DRIVING PROVIDED
BY PUBLIC TRANSIT DRIVERS/ATTENDANTS:
BY PURPOSE/DESTINATION STRATA

Non-driving functions provided by public transit drivers/attendants:	Total*	Work/Downtown			Work/ Suburban	Non-work/ Downtown	Non-work/ Suburban
		Total	Bus Users	Car Users			
	%	%	%	%	%	%	%
They are a source of information	56	56	60	53	56	58	51
They give you a feeling of safety, security	41	40	32	47	50	38	41
Ability to give first aid/ help in an emergency	20	16	12	18	20	21	24
Courtesy, friendliness towards passengers	16	19	23	16	11	17	12
Their presence can prevent crimes	12	15	14	16	4	12	14
Helpful assistance to the elderly, handicapped	10	12	17	8	8	11	9
Provide maintenance of the vehicle	7	6	5	7	4	9	8
Other	4	2	4	1	5	4	5
Don't know	1	1	-	1	1	1	-
None	5	5	1	8	3	5	5
N =	(541)	(173)	(83)	(88)	(98)	(168)	(102)

31.

*Columns add to more than 100% due to multiple responses

to passenger safety and security, and conferring a "personal touch" to transit interactions, as detailed below:

- Over half of the persons interviewed (56%) cite information provision as a duty of public transit drivers/attendants
- Four out of ten respondents (41%) indicate that these persons provide a sense of "safety and security"
 - In fact, 12% feel that the presence of drivers/attendants can actually prevent crimes from occurring
 - Related to this, 20% of the sample notes that drivers/attendants are providers of first aid or other help in emergency situations
- Sixteen percent of the persons interviewed include "courtesy and friendliness" among driver/attendant duties
 - 10% include "helpful assistance" to the elderly and handicapped

Beyond these three realms, 7% of the sample believe that vehicle maintenance is a duty of public transit drivers/attendants.

In general, persons within each of the Purpose/Destination strata were as likely to mention each of the duties listed above as was the norm. Comparison of key demographic subgroups (Table III-6), however, reveals that:

- Whites and persons in the middle to high income ranges are more likely to state that drivers/attendants give them a feeling of security

Table III-6

FUNCTIONS OTHER THAN DRIVING PROVIDED BY PUBLIC TRANSIT
DRIVERS/ATTENDANTS: BY DEMOGRAPHIC SEGMENTS

Non-driving functions provided by public transit drivers/attendants:	Sex			Age			Race		Income		
	Total*	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
They are a source of information	56	54	57	57	53	58	56	53	60	51	58
They give you a feeling of security	41	43	40	41	43	40	43	33	32	44	46
Ability to give first aid/help in emergency	20	20	20	16	28	12	22	5	16	16	28 ^{33.}
Courtesy, friendliness towards passengers	16	10	20	15	13	21	14	23	19	16	12
Their presence can prevent crimes	12	10	14	11	17	6	13	7	7	11	18
Helpful assistance to the elderly, handicapped	10	11	10	12	9	10	10	15	15	10	7
Provide maintenance on the vehicle	7	8	6	7	9	2	7	4	4	8	8
Other	4	6	2	5	4	3	4	3	4	5	3
Don't know	1	1	*	1	1	1	1	-	-	2	-
None	5	5	4	4	4	8	4	7	3	6	5
N =	(541)	(249)	(292)	(218)	(197)	(125)	(466)	(75)	(162)	(197)	(177)

*Columns add to more than 100% due to multiple responses

- Whites, persons 35 to 49 years of age and persons with incomes of \$25,000 or more are more likely to perceive drivers/attendants as persons capable of providing first aid or other help in emergencies
- Women and non-whites are more likely to cite "courtesy and friendliness towards passengers" as driver/attendant duties

For the AGT mode, respondent preferences with regard to system location (above, below, or on ground level) were probed. The majority of the persons interviewed (54%) would prefer a system on ground level, although almost one-third (32%) would prefer an above ground system (Table III-7). Twelve percent noted a preference for a below ground system, and 1% expressed no preference.

Respondents in favor of a ground level AGT system most often cited reasons of safety (both related to crime and personal mishaps -- 70%) as influences of this preference. The ability to see one's surroundings, greater ease of access, and lessening of "claustrophobic" feelings were each mentioned by 24% of the persons preferring a ground level location. Twenty-two percent reported preferring this location due to a dislike of heights. (Table III-8)

Persons most amenable to an above ground AGT system were most often led towards this preference because of the more scenic ride permitted by this location (57%). Other key motivators were enhanced safety (37%) and the avoidance of traffic congestion (38%). Twenty-one percent cited the reduction in claustrophobic feelings as a reason for their location choice, and 12% believe that an above ground system results in less travel time.

Table III-7

PREFERRED AGT LOCATION

<u>Percent indicating preference for an AGT system located:</u>	<u>Work/Downtown</u>				<u>Work/ Suburban</u>	<u>Non-work/ Downtown</u>	<u>Non-work/ Suburban</u>
	<u>Total</u>	<u>Total</u>	<u>Bus</u>	<u>Car</u>			
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Above ground level	32	37	34	40	32	33	24
Below ground level	12	12	17	8	10	10	18
On ground level	54	50	49	50	57	56	58
Don't know, no preference	1	2	-	3	1	1	-
N =	(549)	(177)	(84)	(91)	(99)	(168)	(105)

The 12% of the sample preferring a below ground AGT system most often mentioned the avoidance of traffic congestion (51%) as a reason for this preference. Approximately 24% to 31% of these persons specified each of the following as choice motivators: the reduced destruction of landscape resulting from below ground placement, safety enhancement, reduced weather interference, lower noise level, and less travel time.

2. Travel time-difference from auto

The difference between auto travel time and travel time using public transit is the second most important factor to consumers when making transit use decisions.

As would be expected, transit users generally prefer less travel time to more travel time at all the times considered in this study. The travel time which is lost when a trip increases from 15 to 30 minutes more than auto is especially valuable to the user. It results in greater disutility than an increase in travel time from 0 to 15 minutes more than auto (.35 versus .25) (Table III-11). This can be seen from the increasingly steeper (downward) slope in the graph of average utilities as travel time increases. (Figure III-2)

Analysis of demographic groups reveals that people under 35 years of age and whites are somewhat more "time sensitive" than are people 35 years old and over and non-whites. (Table III-12)

3. Frequency of service

Closely related to travel time is the frequency of service. As expected, riders prefer more frequent service to less frequent service. Differences in the utility between the levels of service are sharper as waiting time increases. (Figure III-3)

Table III-8

REASONS FOR PREFERRING AGT LOCATION

Reasons cited for location preference:	Persons Preferring	Persons Preferring	Persons Preferring
	A Ground Level	An Above Ground	A Below Ground
	AGT System	AGT System	AGT System
	%*	%	%
Safer, less chance of accidents and/or violence, crime	70	37	28
Avoid traffic congestion	-	38	51
Ability to see surrounding scenic ride	24	57	2
Do not like enclosed areas, get claustrophobic	24	21	-
Ease of access, no steps up or down	24	3	2
Do not like heights	22	-	4
Cheaper to construct, therefore less cost to passengers	7	14	2
Lower noise level	-	5	25
Requires less land space	-	4	12
Faster, less travel time	3	12	24
Doesn't destroy or clutter up landscape	2	2	31
Weather would not interfere with service	1	1	28
Other	6	13	10
	N = (299)	(178)	(67)

*Columns add to more than 100% due to multiple responses

Figure III-2

TRAVEL TIME DIFFERENCE FROM AUTO

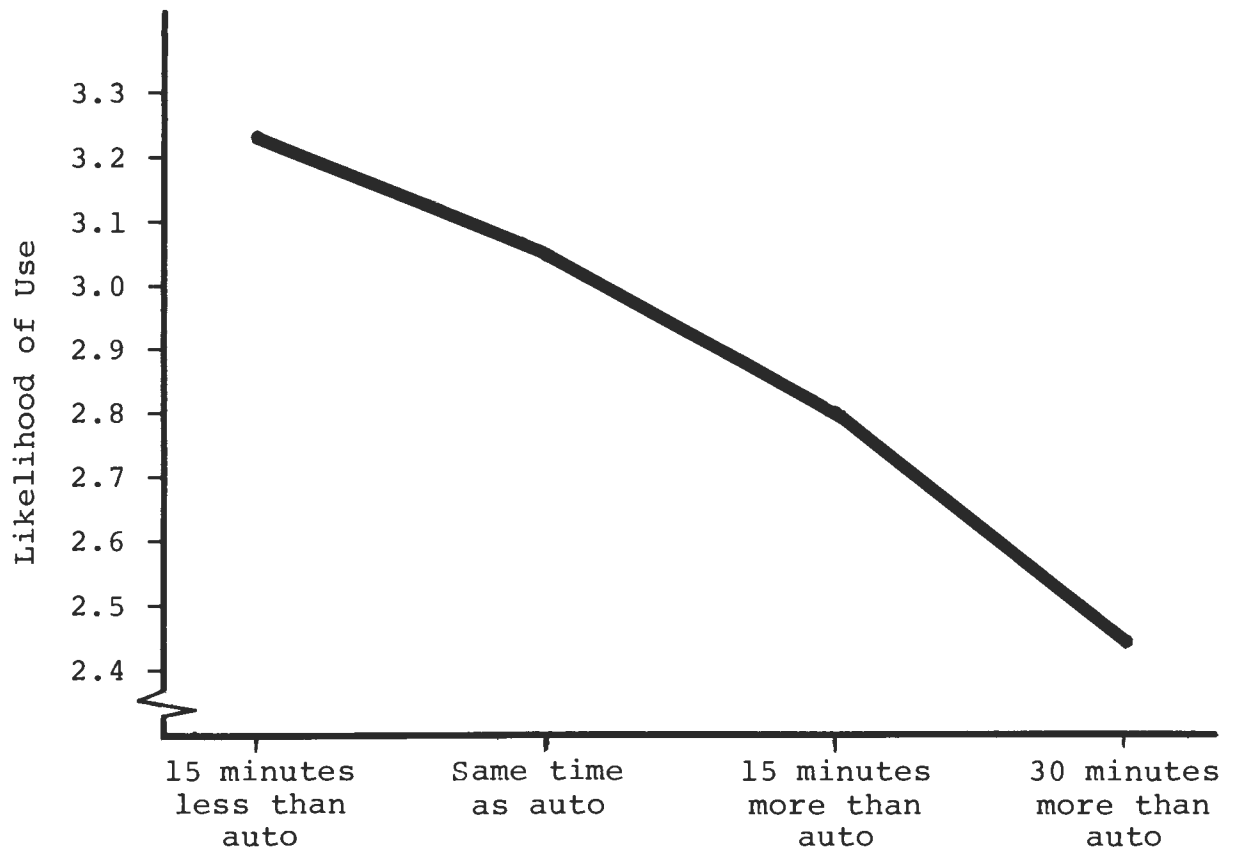
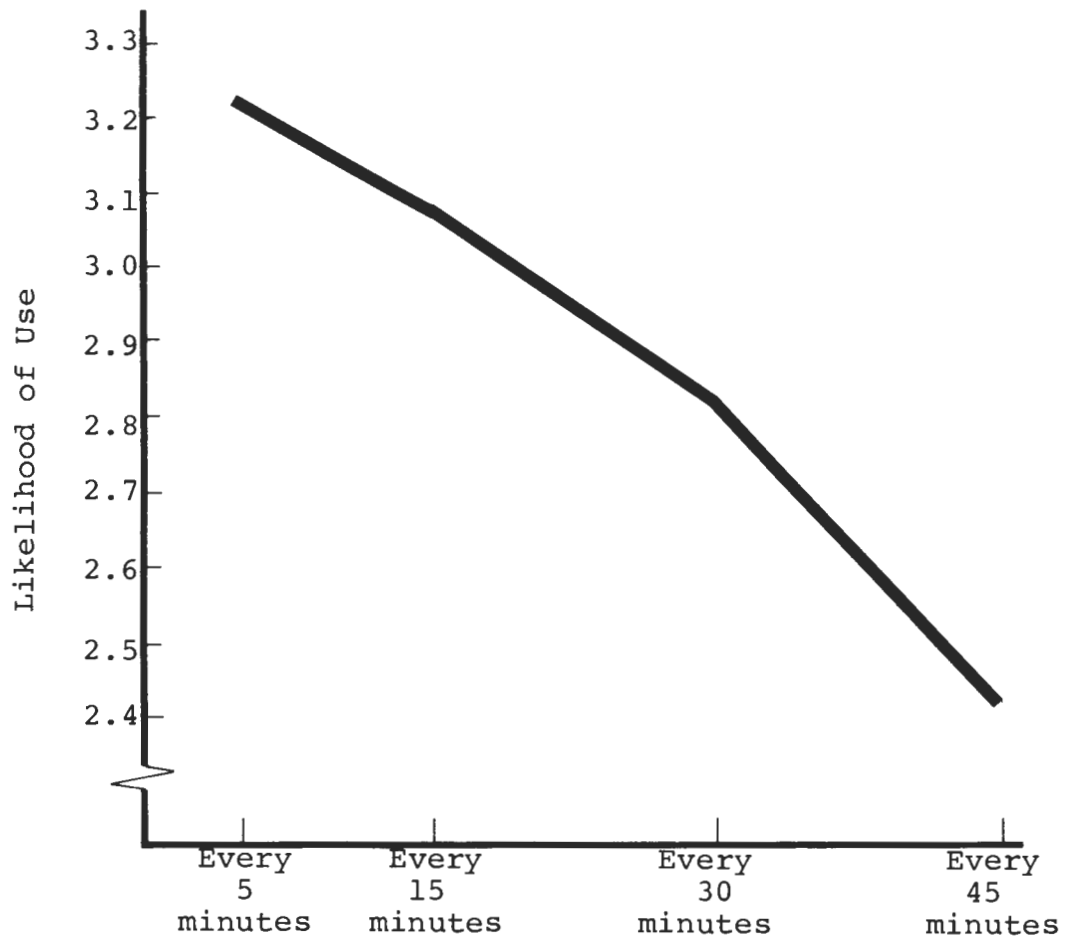


Figure III-3
FREQUENCY OF SERVICE



From a "transit operations" point of view, however, there may be great equipment strain involved with increasing service; therefore, it is important to examine what each step "buys" in customer utility. Going from every 45 minutes to every 30 minutes produces a large (0.42) increase in utility (compare this with 0.12 difference between rail and AGT). Reducing the wait to 15 minutes increases utility by 0.26 which is worth more to the consumer than a \$0.50 price reduction (compared to auto).*

4. Price difference from auto

When all other factors are held constant, transit users prefer a lower to a higher price on the average (Figure III-4). Typically, transit users seem less concerned with paying less than what auto travel would cost than with not paying more than the cost of auto in the absence of other beneficial transit features. Utility falls by relatively small amounts from the "\$1.00 less" to "\$.50 less" and "\$.50 less" to "same" price levels (.19 and .22 on the average). However, the decline in utility from the "same" to "\$.50 more" level is approximately equal in magnitude to the sum of these two decrements (.39).

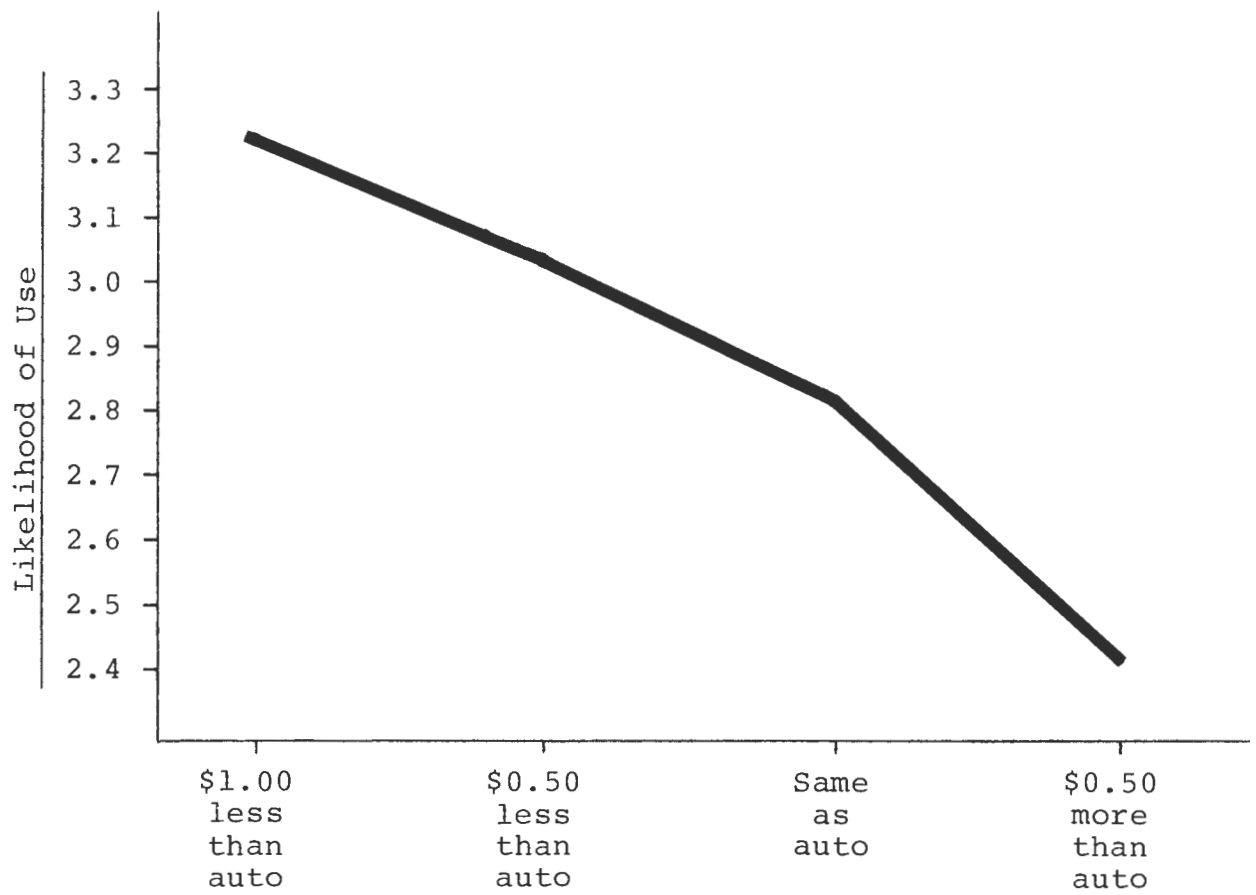
The users' utility for different price levels provides a scale against which to measure trade-offs with other attributes. For example:

- If the price of transit is dropped from the "same" level to "\$.50 less than auto," the data suggest that this will practically offset a decline in service from every 15 minutes to every 30 minutes. (The utility differences between these two sets of levels are approximately equal: .22 and .26.)

*See price section that follows

Figure III-4

PRICE DIFFERENCE FROM AUTO



- Alternatively, if travel time is reduced from 30 minutes more than auto to 15 minutes more (a utility gain of .35), the average user will pay almost \$.50 more per ride than the cost of auto (a utility loss of .39). Thus, when a significant consumer benefit is added, users indicate they will pay more than the cost of auto.

Trade-offs like those illustrated above should be viewed as approximate for several reasons. First, the other transit features need to be considered. Second, the "average" user is an ideal type. Many individual users may behave differently.

For example, younger people (18 to 34), wealthier people (over \$25,000 income) and whites are somewhat more price sensitive than is the general population. (At the "\$.50 more" level, their utilities decline even more sharply than those for other groups -- Table III-11). Even with these caveats, the examples mentioned above illustrate how the data can be used in future simulation analyses.

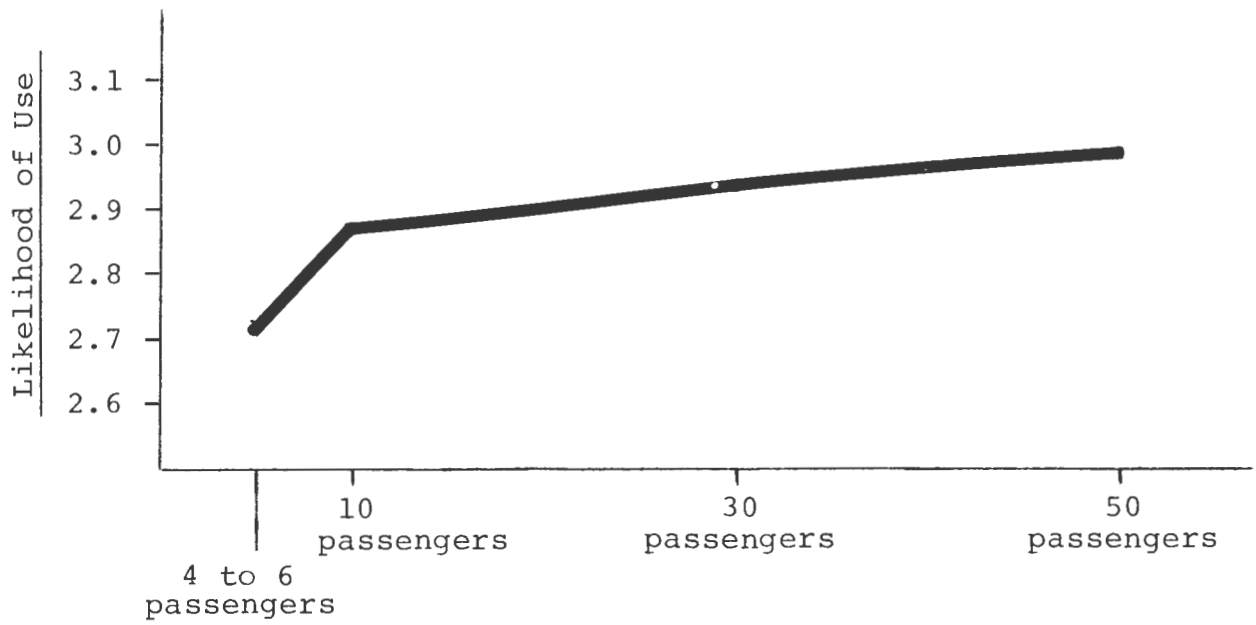
5. Vehicle size

The conjoint analysis demonstrates that public transit users generally prefer larger vehicles to smaller ones (Figure III-5). However, within the range of vehicle sizes tested in the conjoint analysis, there is little benefit lost by using smaller vehicles.

Consumers' vehicle size preferences were also probed in isolation -- that is, removed from the context of the conjoint rating task. Three percent of the respondents indicated that if they had to make a choice on the size of the vehicle in which

Figure III-5

VEHICLE SIZE



to ride public transit, 3% would prefer a vehicle size of four to six passengers. Seventeen percent reported a preference for a vehicle size of ten passengers. Six out of ten noted a preference for a vehicle capable of holding thirty passengers (Table III-9). To this point, then, the results of this single attribute probing are similar to the findings of the conjoint analysis, in that larger vehicles are preferred to smaller vehicles. However, the variations in consumer preferences for one size versus another are more marked than those derived via the conjoint analysis. Furthermore, only 18% of the persons interviewed reported a preference for a vehicle capacity of 50 or more passengers, although the 50 passenger size had the greatest utility in the conjoint analysis of consumers' "total product" ratings.

Various explanations can be offered for these apparent discrepancies. With regard to the differential reactions to the largest size category, it bears mention that the largest size category in the isolated questionnaire item was "50 or more passengers," while in the conjoint analysis, the highest category was "50 passengers." It may well be the case that the "or more" component of the single-item probe triggers negative reactions which would not have been found if the category were identical to that included in the conjoint analysis. Accordingly, caution must be taken in extrapolating the increase in consumer preference as vehicle size increases (demonstrated in the conjoint analysis) beyond the "50 passenger" vehicle capacity included in that analytical model.

Secondly, the variations in the magnitude of the differences found for the relative preferences of one vehicle size over another in the two separate means of preference measurement is not unexpected, given the conceptual differences of these two methods of measurement. Conjoint measurement involves the rating of hypothetical "total products," whereas single attribute measurement essentially requires that consumers state preferences based

Table III-9

PREFERRED VEHICLE SIZE

Percent indicating preference for vehicles holding:	Work/Downtown				Work/ Suburban	Non-work/ Downtown	Non-work/ Suburban
	Total %	Total %	Bus Users %	Car Users %			
4 to 6 passengers	3	4	2	7	2	1	3
10 passengers	17	11	8	14	22	23	14
30 passengers	60	58	58	57	66	60	59
50 or more passengers	18	24	27	21	7	14	23
Don't know	2	2	4	1	3	2	2
N =	(549)	(177)	(84)	(91)	(99)	(168)	(105)

on actual experience. Insofar as vehicles with a capacity of less than 30 passengers are not presently available in the Atlanta area, it is not surprising that the majority of the respondents state a preference for the vehicle size with which they are familiar. Accordingly, the two lesser size categories are preferred by substantially fewer persons in the single attribute rating than in the conjoint ratings.

Respondents were asked to specify the reasons for their vehicle size selection. Those persons preferring a vehicle capacity of ten passengers most often cited the following reasons for this choice (Table III-10):

- Dislike of crowded areas (43%)
- Increased comfort (20%)
- Healthier atmosphere (e.g., less confining, stuffy -- 16%)
- Perception that there is safety in numbers (16%)
- Speed of loading and unloading (10%)
- Reduced noise (10%)
- Increased availability of seats (10%)
- Increased privacy, impersonal atmosphere (10%)

Individuals most amenable to a vehicle capacity of 30 passengers most often revealed the following motivations for this choice:

- Dislike of crowded areas (31%)
- Perception that a 30 passenger vehicle might be more economical (25%)

Table III-10

REASONS FOR PREFERRING VEHICLE SIZE*

Reasons cited for vehicle size preference:	Persons Preferring a Vehicle Size of 10 Passengers	Persons Preferring a Vehicle Size of 30 Passengers	Persons Preferring a Vehicle Size of 50 or more Passengers
	%**	%	%
Don't like crowded areas	43	31	6
More comfortable	20	14	7
Healthier atmosphere, less confining, less stuffy	16	5	-
Feel there is safety in numbers	16	17	11
Friendliness among passengers	15	6	7
More impersonal atmosphere, more privacy	10	5	-
Faster to load and unload	10	7	-
Less noise	10	3	-
More availability of seats	10	17	30
More efficient, carry more passengers	6	19	32
Frequency of stops not excessive	6	4	-
More rapid transit	5	3	6
Would run more frequently	4	4	2
Might be more economical	4	25	34
More easily handled by driver	1	-	-
Energy saver	-	4	8
Fewer runs required	-	2	3
Other	11	11	10
	N = (95)	(330)	(98)

*Reasons cited by persons preferring a vehicle size of 4 to 6 passengers are not presented due to the small number of respondents (N = 14)

**Columns add to more than 100% due to multiple response

- Perception that a 30 passenger vehicle would be more efficient, in that it could carry more passengers (19%)
- Perception that there is safety in numbers (17%)
- Increased availability of seats (17%)
- Increased comfort (14%)

Finally,* the portion of the sample composed of persons preferring a vehicle size capable of holding 50 or more passengers most often gave the following reasons for this preference:

- Perception that a 50 passenger vehicle might be more economical (34%)
- Perception that a 50 passenger vehicle might be more efficient in that it could carry more passengers (32%)
- Increased availability of seats (30%)
- Perception that there is safety in numbers (11%)

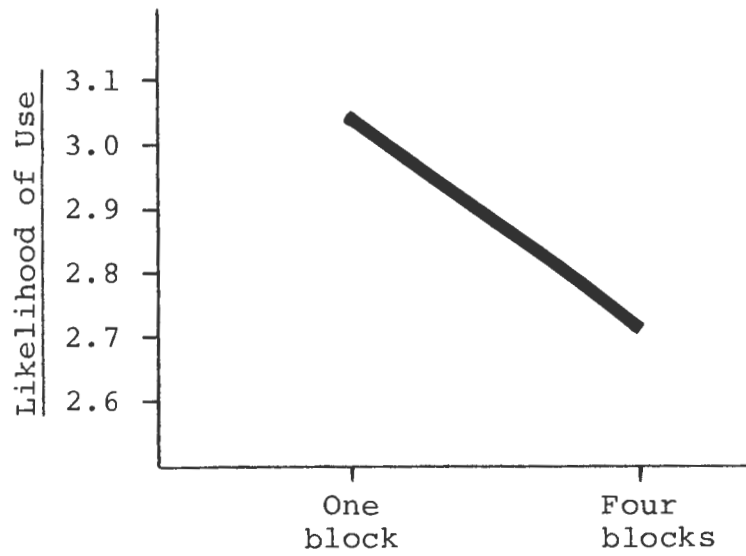
6. Distance to destination from station

Not surprisingly, transit users would prefer to have a shorter walk (or taxi ride) from the station to their destination (Figure III-6). This factor is less important, overall, than the preceding ones, but the magnitude of the change in utility from one block to four blocks (-0.32) suggests that station location is worth careful consideration. Close proximity to the station is especially valued by women and by whites in contrast to men and non-whites. (Table III-11)

*Reasons cited by the persons preferring a vehicle size of four to six passengers are not discussed due to the small size of that group (N = 17)

Figure III-6

DISTANCE TO DESTINATION FROM STATION



7. Distance to station from home

The companion factor to the previous one exhibits very similar results -- transit users prefer to walk (or ride) shorter distances to a station from home (Figure III-7). Since people generally have more flexibility regarding travel to the home station as opposed to their destination station, it makes sense that the latter is a bit more important. Moreover, station location within one block of homes may prove to be less feasible than close location to popular destinations.

8. Seat guarantee

The least important factor (among those considered) is the guarantee of a seat (Figure III-8). While consumers prefer a guaranteed seat to a 50% chance of getting a seat, the guarantee means less to them than having frequent service, short travel time home and a relatively low price.

B. Relative Importance of Transit Attributes

On the average, transit mode is the most important feature. Next in importance are factors relating to time and money: frequency of service, travel time and price. Changes in the specific amounts or levels of these factors can be expected to have the greatest impact on users' preferences. (Figure III-9 and Table III-12)

Vehicle size (which may represent a safety issue) is somewhat lower in importance than these key factors, followed by a set of factors that are apparently viewed as amenities by transit users. Distance to destination, distance to home, and seat guarantee are clearly less important than the other factors considered. Changes in the public transit features can be expected to have the least impact on users' preferences.

Figure III-7

DISTANCE TO STATION FROM HOME

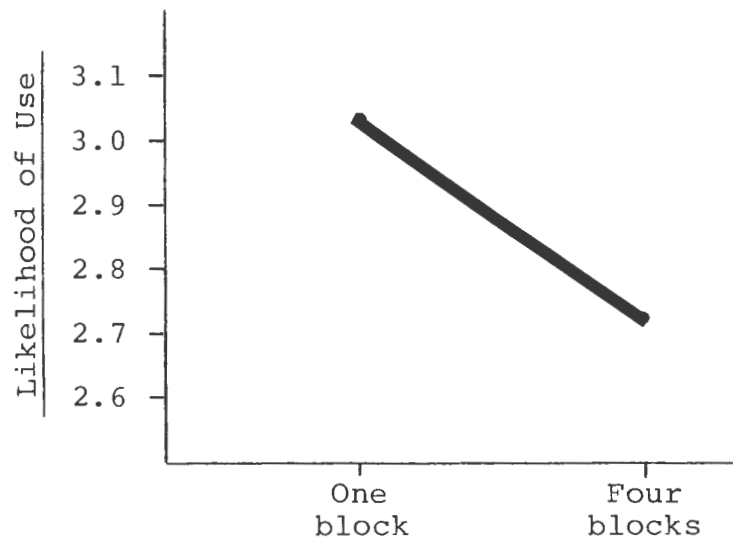


Figure III-8

SEAT GUARANTEE

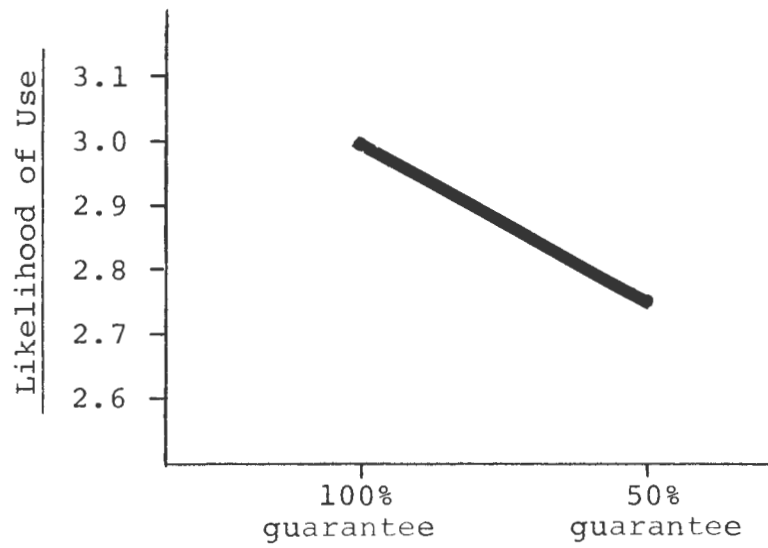


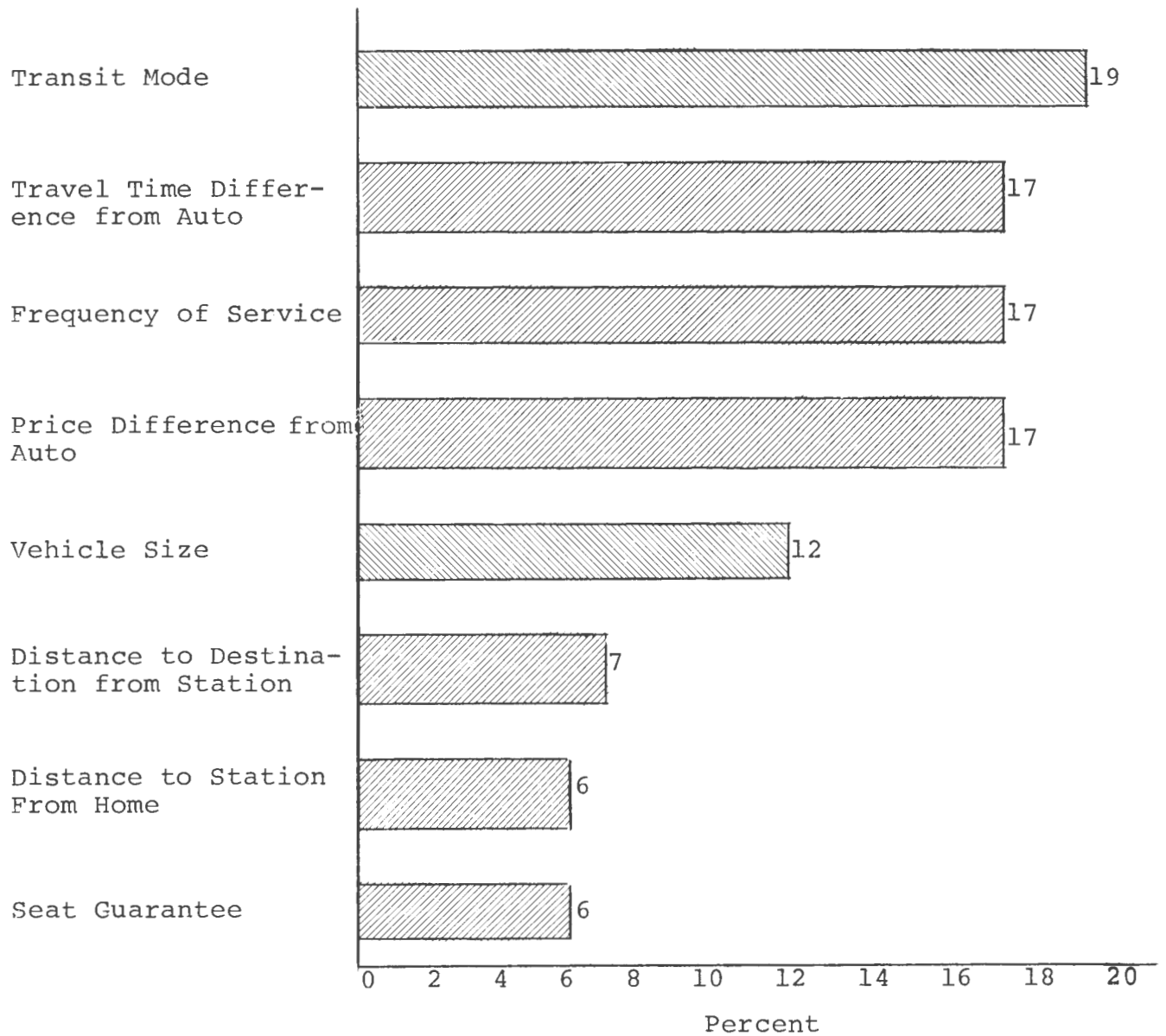
Figure III-9RELATIVE IMPORTANCE OF FACTORS IN THE
SELECTION OF PUBLIC TRANSIT

Table III-11

UTILITIES OF TRANSIT FEATURES BY USER SEGMENTS

	Total	Sex		Age			Income			Race		Version				Work/ Downtown	
		Male	Female	18 to 34	35 to 49	50 and over	Under \$15,000	\$15,000 to \$24,999	\$25,000 or over	White	Non-white	Work/Down-town	Work/Sub-urban	Non-work/Down-town	Non-work/Sub-urban	Bus	Auto
Transit Mode																	
Rail	2.95	3.02	2.89	2.92	2.98	2.97	2.95	2.98	2.92	2.93	3.08	3.04	2.80	2.94	2.97	3.04	3.05
Local bus	2.79	2.82	2.75	2.82	2.71	2.84	2.95	2.79	2.62	2.73	3.14	2.82	2.66	2.85	2.74	3.00	2.65
Express bus	2.95	3.05	2.87	2.88	2.90	3.15	3.04	2.88	2.94	2.92	3.13	2.93	2.78	3.06	2.97	3.05	2.83
AGT	2.83	3.02	2.68	2.84	2.84	2.81	2.76	2.80	2.93	2.84	2.80	2.84	2.83	2.83	2.83	2.81	2.87
Frequency of Service																	
Every 5 minutes	3.23	3.31	3.16	3.24	3.24	3.19	3.28	3.21	3.19	3.20	3.41	3.28	3.09	3.25	3.22	3.36	3.20
Every 15 minutes	3.08	3.16	3.02	3.04	3.10	3.13	3.15	3.05	3.04	3.06	3.22	3.13	3.01	3.08	3.07	3.23	3.06
Every 30 minutes	2.82	2.93	2.72	2.79	2.78	2.91	2.83	2.79	2.83	2.80	2.92	2.83	2.70	2.86	2.82	2.91	2.76
Every 45 minutes	2.40	2.51	2.31	2.38	2.33	2.54	2.44	2.39	2.36	2.37	2.59	2.39	2.26	2.48	2.40	2.40	2.38
Vehicle Size																	
4 to 6 passengers	2.72	2.81	2.65	2.70	2.70	2.80	2.75	2.73	2.68	2.70	2.84	2.72	2.65	2.76	2.73	2.84	2.62
10 passengers	2.88	2.97	2.80	2.86	2.86	2.92	2.89	2.86	2.86	2.86	2.98	2.93	2.77	2.88	2.88	2.98	2.88
30 passengers	2.94	3.04	2.85	2.93	2.90	3.00	3.01	2.92	2.89	2.90	3.13	2.98	2.79	3.01	2.90	3.04	2.92
50 passengers	2.99	3.09	2.90	2.97	2.98	3.05	3.05	2.93	2.99	2.95	3.20	3.01	2.87	3.03	3.00	3.04	2.98
Travel Time																	
15 minutes less	3.23	3.35	3.12	3.27	3.22	3.15	3.17	3.20	3.31	3.24	3.16	3.27	3.13	3.25	3.20	3.32	3.22
Same	3.05	3.14	2.97	3.06	3.03	3.06	3.06	3.04	3.04	3.03	3.14	3.05	2.94	3.09	3.07	3.12	2.99
15 minutes more	2.80	2.87	2.74	2.76	2.79	2.88	2.87	2.81	2.70	2.77	2.99	2.86	2.67	2.83	2.77	2.92	2.81
30 minutes more	2.45	2.54	2.37	2.36	2.41	2.68	2.59	2.40	2.37	2.38	2.86	2.45	2.34	2.51	2.46	2.55	2.37
Price																	
\$1.00 less	3.23	3.34	3.15	3.27	3.20	3.22	3.23	3.20	3.27	3.24	3.21	3.26	3.13	3.25	3.25	3.31	3.21
\$0.50 less	3.04	3.17	2.94	3.06	3.01	3.06	3.06	3.04	3.02	3.03	3.13	3.08	2.88	3.10	3.04	3.21	2.95
Same	2.82	2.93	2.72	2.78	2.80	2.90	2.85	2.79	2.80	2.79	2.96	2.83	2.73	2.83	2.85	2.88	2.78
\$0.50 more	2.43	2.47	2.39	2.34	2.43	2.59	2.56	2.41	2.32	2.36	2.85	2.47	2.33	2.48	2.37	2.50	2.46
Seat Guarantee																	
100%	3.00	3.10	2.92	2.99	2.98	3.06	3.06	2.99	2.96	2.98	3.13	3.03	2.86	3.06	3.00	3.06	3.00
50%	2.76	2.86	2.67	2.73	2.74	2.83	2.79	2.73	2.75	2.73	2.94	2.79	2.67	2.78	2.76	2.89	2.70
Distance to Station from Home																	
One block	3.03	3.10	2.97	3.03	3.00	3.07	3.08	3.00	3.01	3.00	3.18	3.06	2.94	3.05	3.04	3.13	2.99
Four blocks	2.73	2.86	2.63	2.70	2.72	2.81	2.77	2.72	2.70	2.71	2.89	2.76	2.60	2.79	2.72	2.82	2.71
Distance to Destination from Station																	
One block	3.04	3.08	3.00	3.02	3.01	3.10	3.06	3.03	3.01	3.02	3.15	3.04	2.96	3.06	3.06	3.08	3.00
Four blocks	2.72	2.87	2.60	2.71	2.71	2.78	2.79	2.69	2.70	2.69	2.93	2.78	2.58	2.77	2.69	2.87	2.70
N =	(549)	(252)	(297)	(225)	(197)	(126)	(167)	(198)	(179)	(471)	(78)	(177)	(99)	(168)	(105)	(84)	(91)

Table III-12

IMPORTANCE OF TRANSIT FEATURES BY USER SEGMENTS

	Total	Sex		Age			Income			Race		Version				Work / Downtown	
		Male	Female	18 to 34	35 to 49	50 and over	Under \$15,000	\$15,000 to \$24,999	\$25,000 or over	White	Non- white	Work/ Down- town	Work/ Sub- urban	Non-work/ Down- town	Non-work Sub- urban	Work / Downtown	
																Bus	Auto
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Transit Mode	19	18	19	15	19	23	20	19	17	18	22	18	18	20	18	18	18
Frequency of Service	17	17	17	17	18	16	18	17	17	17	19	18	16	16	17	19	17
Vehicle Size	12	12	11	12	11	12	12	11	11	11	13	11	11	12	12	11	12
Travel Time	17	18	16	18	17	14	16	16	18	18	12	17	17	16	18	17	16
Price	17	18	17	19	17	15	16	18	18	18	14	18	17	18	17	18	17
Seat Guarantee	6	6	6	6	6	6	6	6	5	6	5	6	5	6	5	5	7
Distance to Station from Home	6	6	7	7	6	6	7	6	6	6	7	6	7	6	6	6	6
Distance to Destination from Station	7	6	7	7	6	7	6	7	7	7	7	6	8	6	7	6	7
N =	(549)	(252)	(297)	(225)	(197)	(126)	(167)	(198)	(179)	(471)	(78)	(177)	(99)	(168)	(105)	(84)	(91)

While these conclusions hold for the average user of public transit, there are some notable differences between age groups and between the races. Price displaces transit mode as the most important factor for younger people (ages 18 to 34). Non-whites are somewhat less sensitive to differences in travel time and price than are whites. (Table III-12)

C. Conjoint versus Single-Item Importance Ratings

This study contains two measurement approaches for determining the importance of transit features; conjoint analysis of eight attributes and a single-item approach. Thirteen items were included in the single-item method; the eight included in the conjoint task, as well as five others that could only be evaluated as single items. An analysis of the two approaches demonstrates their basic comparability. Some interesting and understandable differences result between methods do arise and these are addressed below.

The rank ordering of the eight factors common to both approaches is presented in Table III-13. Frequency of service, travel time, and price are among the most important features in both cases. Seat guarantee and the two distance-to-station variables are among the least important attributes. Two variables that appear to have inconsistent findings are transit mode and vehicle size. These two factors are viewed as considerably more important in the conjoint measurements than in the single-item responses.

The reasons for the divergence between the latter two probably lies in the conceptual difference between the conjoint method, which is an experimental procedure, and the single-item approach, which is based on actual experience. In the conjoint task, respondents are asked to imagine hypothetical transit scenarios in order to measure their preferences for features that do not currently exist in their city. In particular, AGT and rail transit modes and vehicles under 30 passengers (bus size) are not available to Atlantans. In the single item questions, respondents are asked about the importance of transit features in their

Table III-13

CONJOINT VERSUS SINGLE-ITEM IMPORTANCE RATINGS

<u>Factors</u>	<u>Conjoint Rank</u>	<u>Overall Rank</u>
Transit mode	1	7
Frequency of service	2	2
Travel time	2	1
Price	2	3
Vehicle size	5	8
Distance to destination from station	6	4
Seat guarantee	7	6
Distance to station from home	7	4

actual choices of transportation. In this context, transit mode can only mean the choice between local and express bus, and vehicle size is virtually a constant. Therefore, the importance attached to these attributes is less than that obtained in the experimental questions. If only a universal amount of choice is available, the value of one option over another is small and the salience of the attribute is relatively low. Other attributes, which currently connote a wider range of choice, are relatively more important.

IV. CURRENT AND ANTICIPATED TRANSIT BEHAVIOR

This chapter presents the survey findings pertinent to consumers' current and anticipated transit behavior. The incidence of public transit use by all persons interviewed is summarized at the beginning of the chapter. Following this overview, current transit patterns are described in detail for each of the transit Purpose/Destination strata. At the chapter's conclusion, consumers' anticipations regarding their willingness to pay for AGT are presented.

All documentation for the findings presented in this chapter are included in Appendix A of this report.

A. Incidences of Public Transit Use

Virtually all (97%) of the respondents report having ridden on a local bus, and one-quarter (23%) of those interviewed claim to have ridden on an AGT system. Express bus use and rail use are 80% and 72%, respectively. There are demographic differences with regard to AGT use. Among those interviewed, more men than women, and more whites than non-whites report use of AGT. Furthermore, experience with AGT increases with age and income.

The four transportation Purpose/Destination segments (Work/Downtown, Work/Suburban, Non-work/Downtown, and Non-work/Suburban) tend to have similar incidences of use for each of the various transit modes. However, within the Work/Downtown segment, bus users are less likely than are car users to have ridden on an AGT system (11% compared to 24%). This is also true of those in the Non-work/Suburban stratum. (Tables A-1 and A-2)

B. Current Transportation Patterns for Specific Purposes and Destinations

1. Work/Downtown

More than four-fifths (84%) of those respondents who work downtown use a car, at least occasionally, to reach this destination. Two-thirds (67%) of the Work/Downtown respondents ride a bus to work with some regularity.

Only 1% use some other form of transportation. Interestingly, two-thirds (66%) of those persons who claim they use the bus system most often to get to work downtown also sometimes use a car. On the other hand, only one-third (35%) of those persons who use a car most often indicate they also sometimes take public transportation. (Table A-3)

Respondents over age 50 and those with annual incomes between \$15,000 and \$24,999 are less likely than is the general Work/Downtown stratum to ride the bus to work downtown (54% and 55% versus 67%). However, respondents with yearly incomes under \$15,000 are more likely to ride the bus (82% compared to 67%) and, correspondingly, less likely to use a car (71% versus 84%) to get to work in the downtown area. Nine out of ten respondents (92%) with incomes over \$25,000 use a car to reach their downtown worksite. (Table A-4)

Respondents are fairly evenly split with regard to the mode of transportation they use most often to get to work downtown; 48% use the bus most frequently and 51% use a car most often. Only 1% indicate they use both with equal frequency. (Table A-5)

Again, respondents over 50 years of age and those with annual incomes between \$15,000 and \$24,999 are less likely to say they ride the bus most often to work downtown than is the total Work/Downtown stratum (36% versus 48%), and consequently more likely to use a car most often (64% versus 51%). Bus ridership for this purpose appears to decrease with age. Persons whose yearly income is under \$15,000 are more likely to ride the bus most often (60% versus 48%) for all respondents, and less likely to drive a car (40% versus 51%).

The average time required to get to work in the city is 33.8 minutes. This corresponds well with the hypothetical example of 30 minutes used in the conjoint experiment. Bus users tend to take longer to get to work downtown than do car users (37.6 minutes versus 30.2 minutes) (Table A-6). Non-whites are likely to use less time than the norm.* Their trips average 8.8 minutes less than those of the stratum as a whole and 11 minutes less than the time reported by whites in the sample.

*The reader should be advised to use caution in extrapolating this data to all non-whites due to the small sample size

The average number of weekly round trips for respondents working downtown is 5.3. Four-fifths of the respondents average five round trips per week, 12% average six or more trips and 7% average one to four round trips. These percentages are fairly constant across all demographic and Purpose/Destination breakdowns. (Tables A-8 and A-9)

2. Work/Suburban

When asked to specify the mode or modes of transit used to get to their suburban work site, nearly all (96%) of those respondents in this stratum reported use of a car to get to work. One out of ten of these respondents reported using the bus system, and 4% indicated use of some other mode of transportation such as walking or bicycling. Respondents with incomes under \$15,000 are somewhat more likely to ride the bus to work in the suburbs than are this stratum's respondents overall (22% versus 10%). (Table A-10)

Nine out of ten suburban workers (93%) indicated that the automobile is the mode of transportation which they use most often to and from work. Only 4% claim to use the bus most often, 1% say both bus and car are used with equal frequency, and 2% report some other mode as their most frequently used means of transportation. These percentages are relatively uniform across all demographic breakdowns. (Table A-11)

The average length of time required to get to work in the suburbs on the mode of transportation used most often is 19.4 minutes. It is interesting to note, however, that over half (51%) of those respondents who work in the suburbs take 15 minutes or less to get to their place of employment. Again, no noteworthy subgroup variation is apparent for trip time. (Table A-12)

Respondents who work in the suburbs average 5.4 round trips to work per week or about the same as those working in the downtown area. Males tend to make approximately one more trip per week than females (5.8 trips compared to 5.0). It may be hypothesized that women may be travelling to and from part-time employment (22% make 1 to 4 trips per week) while men are not (6% make 1 to 4 trips per week). (Table A-13)

3. Non-work/Downtown

Respondents who go into the city for shopping, recreational activities or other non-work purposes mention auto more often than bus or other modes as the form of transportation they take downtown (93% versus 44% and 2%, respectively). Although it should be noted that the sample size is small, respondents over 50 years of age are more likely to mention bus than is the norm (60% versus 44%). In fact, bus riding by persons going downtown for non-work reasons increases with age: 35% of the persons 18 to 34 years of age ride the bus for this purpose, 42% of those persons between the ages 35 to 49 do so, and 60% of those respondents 50 years of age or older ride the bus downtown for leisure activities. (Table A-14)

Although, again, the reader should take into account the small sample size, non-whites appear to ride the bus more than do whites (80% versus 38%). Non-whites and respondents over 50 years of age are correspondingly less likely than is the general population to drive a car downtown for leisure activities (72% and 80% versus 93%).

When asked which mode of transportation they use most often to get downtown for recreational purposes, over four-fifths (84%) of the respondents indicated auto. Of the remainder, 16% said bus and 1% mentioned some other mode of transportation. Predictably, respondents 50 years of age or older and non-whites are less likely to indicate car and more likely to indicate bus as their most frequent transportation mode. Likewise, persons earning less than \$15,000 a year are less inclined to use auto and more inclined to use bus as their major transportation mode downtown for non-work purposes.

The average length of time required to get into the city for non-work related activities on the transportation mode most frequently used is 30 minutes. Non-whites (sample size = 25) appear to average about seven minutes less (23 minutes). This is due in part to the fact that 44% of that sample make the trip in 15 minutes or less. (Table A-16)

Respondents average four round trips per month downtown for recreation. Non-whites,* however, average six trips per month. Persons with incomes of \$25,000 or over average only three such trips downtown per month. (Table A-17)

4. Non-work/Suburban

Virtually all respondents who make non-work trips to the suburbs use cars as one of their modes of transportation. This widespread use of automobiles for leisure suburban activities is sustained across all demographic breakdowns. Slightly more than one-fifth (22%) of the respondents say they use the bus for non-work purposes in the suburbs. Men claim to use the bus more than do women for this purpose (37% versus 11%). Persons between the ages of 18 and 34 and those earning less than \$15,000* are more inclined to use the bus than is the norm (39% and 42% compared to 22%). (Table A-18)

Cars are used most often for transportation in the suburbs for non-work trips by 93% of respondents. The remaining 7% claim to use the bus most often. Men are more inclined to use the bus on these trips than are women (14% compared to 2%) and correspondingly less likely to use an automobile. Respondents between the ages 18 to 34 and those whose annual income is less than \$15,000 are the most likely to ride the bus (17% and 18%, respectively). Persons between the ages of 35 and 49 and individuals earning over \$25,000 a year are the least likely to use the bus for non-work excursions to suburban destinations; 100% of both of these segments use cars most frequently for this purpose. (Table A-19)

The low frequency of bus usage for suburban trips either for work or non-work reasons is not surprising. In Atlanta, the downtown area can be thought of as the hub of a wheel where all public transit originates. The spokes, leading from downtown through the city to the suburbs, represent various transportation lines or routes. There are virtually no routes that link one suburban area to another. The only means of getting to these places is to go downtown and switch to a line that goes to the desired suburban location. As such, public transit to suburban areas may be less desirable and considered more burdensome than auto travel.

*Note small sample size

The average length of time required to get to the suburbs on leisure-oriented trips is 18.3 minutes, even though 59% of total respondents claim these trips take 15 minutes or less. Males tend to average longer trips of this nature than do females (21.1 minutes versus 16.4 minutes). Income and trip length appear to be inversely related. Average trip time decreases as annual income increases; respondents earning \$15,000 or less average trips of 20.1 minutes, and those with incomes over \$25,000 average trips of 16.2 minutes.* (Table A-20)

Respondents average eight non-work trips a month into the suburbs. Men and persons over 50 years of age average two less than the norm. Individuals earning less than \$15,000 a year make the greatest number of recreational trips into the suburbs. Respondents in the middle income bracket of \$15,000 to \$24,999 make the fewest number of trips. (Table A-21)

5. Anticipated willingness to pay for AGT

Over nine out of ten (93%) persons interviewed indicated that they would be willing to pay \$.15 for a one-way ride on AGT.**

Seventy-six percent of all respondents indicated that they would be willing to pay \$.35 for this one-way ride on AGT. Among those interviewed, men, older respondents and those with higher incomes are more likely to say they will pay \$.35 for a one-way AGT ride than others in the sample. These findings are consistent with the utilities derived for AGT in the conjoint analysis, where men and those with higher incomes are more positive towards AGT. (Tables III-11 and A-22) Only slight percentage differences are noted for each of the purpose destination strata with more of those in the Non-work/Downtown stratum reporting they would pay \$.35 as compared to the total sample (80% versus 74%). (Table A-23)

*Note small sample size

**The price levels used were based upon the current cost of a one-way ride on Atlanta public transit of \$.15 and the expectation that charges would be increased

Several noteworthy trends are apparent within the demographic subdivisions of each stratum as described below and on Table A-24:

- Within the Work/Downtown stratum (average = 74%),
the greatest willingness to pay \$.35 for a one-way ride on AGT is exhibited by:
 - Men (82% versus 67% for the women within this group)
 - Persons 50 years of age or older (85% compared with 71% for persons 18 to 49)
 - Persons with incomes of \$25,000 or more (84% in contrast to approximately 70% for persons with lesser incomes)
- Within the Work/Suburban stratum (average = 79%),
the greatest willingness to pay \$.35 for a one-way ride on AGT is exhibited by:
 - Men (88% compared with 71% for the female members of this group)
 - Persons 18 to 34 years of age (88% versus 71% to 74% for older persons)
 - Persons with incomes less than \$15,000 or greater than \$24,999 (83% each, in contrast to 73% for the median income category)
- Within the Non-work/Downtown stratum (average = 80%),
the greatest willingness to pay \$.35 for a one-way ride on AGT is exhibited by:
 - Persons less than 50 years of age (approximately 83% versus 71% for persons at least 50 years old)
 - Persons with incomes of \$25,000 or more (90% versus 72% to 78% for persons with lesser incomes)

- Within the Non-work/Suburban stratum (average = 72%), less marked demographic subgroup variations are apparent. However, somewhat greater willingness to pay \$.35 for a one-way ride on AGT is exhibited by:
 - Men (77% compared with 69% of this group's female members)
 - Persons 50 years of age or older (79% in contrast to 75% for persons 35 to 49 years of age and 64% for persons 18 to 34 years of age)
 - Persons with incomes of \$25,000 or more (78% compared with 71% for persons with incomes of \$15,000 to \$24,999 and 67% for individuals with incomes of less than \$15,000)

Respondents who indicated that they were not willing to pay \$.35 for a one-way ride on AGT were asked if they would be willing to pay \$.15 for this ride. An additional 17% of the total respondent population indicated that they would be willing to pay this lesser amount. The number of respondents asked this question was not sufficiently large to permit valid consideration of subgroup variations.

V. MARKETING IMPLICATIONS AND FUTURE RESEARCH

The survey findings presented in the preceding chapters reveal that AGT is not, in and of itself, preferred over the other transit modes investigated. In fact, on the average, the four modes are rated about equal.

Accordingly, the goal of system planners should be to design an AGT system which incorporates a sufficient number of highly valued transit features to offset the somewhat lower value attributed to AGT as compared to rail and express bus service. That this is a reachable goal is indicated by consumers' expressed willingness to trade-off an advantageous transit feature (such as a preferred mode) for another feature which is of even greater value to them.

Travel time, frequency of service and price appear to be the transit variables of greatest salience to consumers in their transit decisions (apart from transit mode). Therefore, reduced travel time, increased frequency of service and a lower price relative to alternative modes are most likely to promote wider use of AGT. For example, AGT would be "as likely" or possibly more likely to be ridden than rail, or express bus if:

- AGT were available on demand and the other transit modes had a frequency of service of every 15 minutes or more, or
- AGT travel time were 15 minutes less than the travel time of alternative modes.

The potential trade-offs presented above are based upon the trade-offs that the average consumer would make when weighing a single transit advantage (e.g., preferred mode) against one other transit advantage. Thus, they assume that all transit features other than the two compared are the same (e.g., equal vehicle size, equal distance to station and destination, etc.). The effect on consumers' transit behavior of the ultimate "real world" product configurations -- in which all other features are not constant -- remains unaddressed.

The application of a market simulator computer program would effectively address this issue. Such a program has the capacity to determine the relative appeal of various transit "products" when they are placed in hypothetical or "simulated" competition with each other--that is, what configuration of AGT, considering all the features in the model, would have greatest appeal over the other transit modes. A "simulator" has the additional capability of reflecting the usage decisions of individual riders rather than the "average" usage decision of the "average" consumer.

Furthermore, consideration should also be given to the formulation of a predictive model of consumer preferences which would take into account variables other than the product feature preferences upon which the current model is based. These additional variables could include demographics, transit involvement and the like. Thus, it may be possible to predict consumer preferences based upon socioeconomic characteristics and current transit behavior.

At whatever level of detail consumer preferences are assessed, incorporation of the expressed preferences in the AGT design should be viewed in light of:

- Supply factors such as cost of operation, timing and feasibility
- Political and economic climates
- Community reaction

In the absence of essential information relevant to each of these areas, the recommendations based on the survey results should be viewed primarily as guidelines rather than as mandates.

Apart from the primary "product configuration" attributes (relative to other transit modes), AGT's planners should pay careful attention to the expressed location and vehicle size preferences as well as to passenger needs related to safety, system reliability, information and a "personal touch." To the extent that these are not considered, ridership of AGT may be adversely affected.

Once the actual AGT configuration is known, the market segments to which it would appeal can be measured more precisely. However, on the surface, an AGT system is likely to appeal to persons currently using alternative transit modes. More importantly, it may attract a substantial number of new riders -- that is, persons currently relying on automobiles (whites, men, members of the middle and upper income brackets) for work-related and, to a lesser extent, non-work-related travel.

APPENDIX A :

DOCUMENTATION FOR FINDINGS PRESENTED
IN CHAPTER IV: CURRENT AND
ANTICIPATED TRANSIT BEHAVIOR

Table A-1

INCIDENCE OF PUBLIC TRANSIT USE
BY DEMOGRAPHIC SEGMENTS

Percent reporting that they have ever ridden:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
On local bus	97	99	96	96	98	98	97	97	96	97	99
On express bus	80	82	79	76	82	85	79	87	79	79	82
By rail	72	77	68	62	76	86	74	61	58	76	79
On AGT	23	28	18	12	29	33	24	14	13	24	31
	N = (549)	(252)	(297)	(225)	(197)	(126)	(471)	(78)	(167)	(198)	(179)

A-1

*Columns add to more than 100% due to multiple responses.

Table A-2

INCIDENCE OF PUBLIC TRANSIT USE BY
PURPOSE/DESTINATION STRATA

<u>Percent reporting that they have ever ridden:*</u>	<u>Total</u> %	<u>Work/Downtown</u>		<u>Work/ Suburban</u> %	<u>Non-work/ Downtown</u> %	<u>Non-work/ Suburban</u> %
		<u>Total</u> %	<u>Bus Users</u> %	<u>Car Users</u> %		
On local bus	97	98	98	98	98	95
On express bus	80	85	89	81	74	82
By rail	72	72	66	79	76	67
On AGT	23	18	11	24	28	17
N =	(549)	(177)	(84)	(91)	(99)	(168)
		(105)				

A-2

*Columns add to more than 100% due to multiple responses.

Table A-3

MODES OF TRANSPORTATION USED BY
 PERSONS WHO WORK DOWNTOWN:
 BY WORK/DOWNTOWN SUBSTRATA

<u>Percent reporting use of:*</u>	<u>Work/Downtown</u>		
	<u>Total</u>	<u>Bus</u>	<u>Car</u>
	<u>%</u>	<u>%</u>	<u>%</u>
Bus	67	100	35
Auto	84	66	100
Other mode of transit	1	1	-
	N = (177)	(84)	(91)

*Columns add to more than 100% due to multiple responses.

Table A-4

MODES OF TRANSPORTATION USED BY PERSONS WHO WORK
DOWNTOWN BY DEMOGRAPHIC SEGMENTS

Percent reporting use of:*	<u>Sex</u>			<u>Age</u>			<u>Race</u>		<u>Income</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>18 to</u> <u>34</u>	<u>35 to</u> <u>49</u>	<u>50 or</u> <u>over</u>	<u>White</u>	<u>Non-</u> <u>white</u>	<u>Under</u> <u>\$15,000</u>	<u>\$15,000</u> <u>to</u> <u>\$24,999</u>	<u>\$25,000</u> <u>and</u> <u>over</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Bus	67	63	69	71	70	54	65	72	82	55	61
Auto	84	85	83	85	83	82	85	78	71	90	92
Other mode of transit	1	-	1	-	2	-	1	-	-	2	-
N =	(177)	(79)	(98)	(79)	(59)	(39)	(141)	(36)	(63)	(62)	(49)

A-4

*Columns add to more than 100% due to multiple responses.

Table A-5

MODE OF TRANSPORTATION USED MOST OFTEN BY PERSONS
WHO WORK DOWNTOWN BY DEMOGRAPHIC SEGMENTS

Percent reporting most frequent use of:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
Bus	48	44	50	53	48	36	46	53	60	36	45
Auto	51	53	50	47	49	64	52	47	40	64	51
Both bus and auto	1	2	-	-	3	-	1	-	-	-	4
N =	(177)	(79)	(98)	(79)	(59)	(39)	(141)	(36)	(63)	(62)	(49)

Table A-6

MINUTES REQUIRED TO GET TO WORK DOWNTOWN
 ON MOST OFTEN USED TRANSPORTATION MODE:
 BY WORK/DOWNTOWN SUBSTRATA

<u>Percent reporting usual trip lengths of:</u>	<u>Total</u>	<u>Work/Downtown</u>		
		<u>Total</u>	<u>Bus Users</u>	<u>Car Users</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
15 minutes or less	6	6	2	9
16 to 20 minutes	14	14	12	15
21 to 30 minutes	35	35	32	37
More than 30 minutes	46	46	54	38
Mean	33.8	33.8	37.6	30.2
N =	(175)	(175)	(84)	(91)

Table A-7

MINUTES REQUIRED TO GET TO WORK DOWNTOWN ON MOST
OFTEN USED TRANSPORTATION MODE BY DEMOGRAPHIC SEGMENTS

Percent reporting usual trip lengths of:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
15 minutes or less	6	1	9	8	5	3	3	17	8	5	4
16 to 20 minutes	14	14	13	16	14	8	10	28	21	10	11
21 to 30 minutes	35	36	34	34	25	51	32	44	35	29	45
More than 30 minutes	46	48	44	42	56	38	55	11	36	56	40
Mean	33.8	35.3	32.5	31.6	36.0	34.9	36.0	25.0	31.9	34.6	34.6
N =	(175)	(77)	(98)	(79)	(57)	(39)	(139)	(36)	(63)	(62)	(47)

Table A-8

AVERAGE NUMBER OF TRIPS PER WEEK TO AND FROM
WORK DOWNTOWN BY DEMOGRAPHIC SEGMENTS

Percent reporting an average number of round trips of:	<u>Sex</u>			<u>Age</u>			<u>Race</u>		<u>Income</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>18 to</u> <u>34</u>	<u>35 to</u> <u>49</u>	<u>50 or</u> <u>over</u>	<u>White</u>	<u>Non-</u> <u>white</u>	<u>Under</u> <u>\$15,000</u>	<u>\$15,000</u> <u>to</u> <u>\$24,999</u>	<u>\$25,000</u> <u>and</u> <u>over</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
1 to 4 per week	7	12	4	5	7	13	8	3	3	6	12
5 per week	81	74	86	78	86	77	82	74	79	82	82
6 or more per week	12	14	10	17	7	10	9	23	18	11	6
Mean	5.3	5.3	5.3	5.4	5.2	5.1	5.2	5.7	5.5	5.4	4.9
N =	(177)	(79)	(98)	(79)	(59)	(39)	(141)	(36)	(63)	(62)	(49)

A-8

Table A-9

AVERAGE NUMBER OF ROUND TRIPS TO AND FROM
 WORK/DOWNTOWN: BY WORK/DOWNTOWN SUBSTRATA

<u>Percent reporting an average number of round trips of:</u>	<u>Work/Downtown</u>			
	<u>Total</u> %	<u>Total</u> %	<u>Bus Users</u> %	<u>Car Users</u> %
1 to 4 per week	7	7	2	12
5 per week	81	81	86	76
6 or more per week	12	12	12	12
Mean	5.3	5.3	5.4	5.2
N =	(177)	(177)	(84)	(91)

Table A-10

MODES OF TRANSPORTATION USED BY PERSONS WHO WORK
IN THE SUBURBS BY DEMOGRAPHIC SEGMENTS

Percent reporting use of:**	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
Bus	10	6	14	11	9	*	11	*	22	5	8
Auto	96	98	94	100	91	*	96	*	96	97	95
Other mode of transit	4	4	4	2	3	*	3	*	—	8	3
	N = (99)	(48)	(51)	(44)	(32)	(23)	(94)	(5)	(63)	(62)	(49)

A-10

*Percentages not reported because sample size was less than 25.

**Columns add to more than 100% due to multiple responses.

Table A-11

MODE OF TRANSPORTATION USED MOST OFTEN BY PERSONS
WHO WORK IN THE SUBURBS BY DEMOGRAPHIC SEGMENTS

Percent reporting most frequent use of:*	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
Bus	4	2	6	2	6	*	4	*	*	-	5
Auto	93	94	92	93	91	*	94	*	*	95	92
Both bus and auto	1	-	2	2	-	*	1	*	*	3	-
Other mode of transit	2	4	-	2	3	*	1	*	*	3	3
N =	(99)	(48)	(51)	(44)	(32)	(23)	(94)	(5)	(23)	(37)	(38)

A-11

*Percentages not reported because sample size was less than 25.

Table A-12

MINUTES REQUIRED TO GET TO WORK IN THE SUBURBS
ON MOST OFTEN USED MODE OF TRANSPORTATION
BY DEMOGRAPHIC SEGMENTS

Percent reporting usual trip length of:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
15 minutes or less	51	54	48	46	53	*	52	*	*	53	53
16 to 20 minutes	19	21	18	19	25	*	19	*	*	25	16
21 to 30 minutes	16	17	16	19	12	*	15	*	*	14	16
More than 30 minutes	13	8	18	16	9	*	14	*	*	8	16
Mean	19.4	18.0	20.7	21.2	17.8	*	19.5	*	*	17.5	19.2
N =	(98)	(48)	(50)	(43)	(32)	(23)	(93)	(5)	(23)	(36)	(38)

A-12

*Percentages not reported because sample size was less than 25.

Table A-13

AVERAGE NUMBER OF TRIPS PER WEEK TO AND FROM WORK
IN THE SUBURBS BY DEMOGRAPHIC SEGMENTS

Percent reporting an average number of round trips of:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
1 to 4 per week	14	6	22	11	16	*	15	*	*	8	21
5 per week	64	65	63	61	75	*	64	*	*	76	53
6 or more per week	22	29	16	27	9	*	21	*	*	16	26
Mean	5.4	5.8	5.0	5.6	4.9	*	5.3	*	*	5.1	5.4
N =	(99)	(48)	(51)	(44)	(32)	(23)	(94)	(5)	(23)	(37)	(38)

A-13

*Percentages not reported because sample size was less than 25.

Table A-14

MODES OF TRANSPORTATION USED BY PERSONS
FOR NON-WORK PURPOSES DOWNTOWN BY DEMOGRAPHIC SEGMENTS

Percent reporting use of:*	<u>Sex</u>			<u>Age</u>			<u>Race</u>		<u>Income</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>18 to</u>	<u>35 to</u>	<u>50 or</u>	<u>White</u>	<u>Non-</u>	<u>Under</u>	<u>\$15,000</u>	<u>\$25,000</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>34</u>	<u>49</u>	<u>over</u>	<u>%</u>	<u>white</u>	<u>\$15,000</u>	<u>to</u>	<u>and</u>
				<u>%</u>	<u>%</u>	<u>%</u>		<u>%</u>	<u>%</u>	<u>\$24,999</u>	<u>over</u>
										<u>%</u>	<u>%</u>
Bus	44	44	44	36	42	60	38	80	52	38	45
Auto	93	95	91	96	98	80	96	72	88	97	92
Other mode of transit	2	4	-	2	2	3	2	-	2	2	2
N =	(168)	(82)	(86)	(66)	(66)	(35)	(143)	(25)	(48)	(68)	(51)

A-14

*Columns add to more than 100% due to multiple responses.

Table A-15

MODE OF TRANSPORTATION USED MOST OFTEN BY PEOPLE
FOR NON-WORK PURPOSES DOWNTOWN BY DEMOGRAPHIC SEGMENTS

Percent reporting most frequent use of:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
Bus	16	13	17	11	9	34	8	56	27	7	16
Auto	84	85	83	88	91	66	91	44	71	93	84
Both bus and auto	-	-	-	-	-	-	-	-	-	-	-
Other mode of transit	1	1	-	2	-	-	1	-	2	-	-
N =	(168)	(82)	(86)	(66)	(66)	(35)	(143)	(25)	(48)	(68)	(51)

Table A-16

NUMBER OF MINUTES REQUIRED TO GET DOWNTOWN FOR NON-WORK PURPOSES
ON MOST OFTEN USED MODE OF TRANSPORTATION BY DEMOGRAPHIC SEGMENTS

Percent reporting usual trip lengths of:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
15 minutes or less	11	7	14	17	8	3	5	44	21	7	6
16 to 20 minutes	17	17	16	17	23	6	16	20	15	24	10
21 to 30 minutes	41	46	36	39	39	49	44	24	42	37	47
More than 30 minutes	32	29	34	27	30	43	35	12	23	32	37
Mean	29.7	29.0	30.4	28.4	29.3	33.4	30.9	22.7	27.6	29.8	31.2
N =	(168)	(82)	(86)	(66)	(66)	(35)	(143)	(25)	(48)	(68)	(51)

A-16

Table A-17

AVERAGE NUMBER OF TRIPS PER MONTH FOR NON-WORK
PURPOSES DOWNTOWN BY DEMOGRAPHIC SEGMENTS

Percent reporting on average number of round trips of:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
1 per month	19	16	22	26	21	3	22	-	17	22	18
2 per month	30	27	34	28	30	34	32	21	31	26	34
3 to 5 per month	28	37	20	28	21	43	26	42	27	25	34
6 to 10 per month	17	13	20	14	21	14	16	21	15	24	10
11 or more per month	5	7	4	5	6	6	4	17	10	3	4
Mean	4.0	4.2	3.8	3.6	4.2	4.2	3.6	6.1	4.3	4.2	3.4
N =	(168)	(82)	(86)	(66)	(66)	(35)	(143)	(25)	(48)	(68)	(51)

A-17

Table A-18

MODES OF TRANSPORTATION USED BY PERSONS FOR NON-WORK
PURPOSES IN THE SUBURBS BY DEMOGRAPHIC SEGMENTS

Percent reporting use of:**	<u>Sex</u>			<u>Age</u>			<u>Race</u>		<u>Income</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>18 to</u>	<u>35 to</u>	<u>50 or</u>	<u>White</u>	<u>Non-</u>	<u>Under</u>	<u>\$15,000</u>	<u>\$25,000</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>34</u>	<u>49</u>	<u>over</u>	<u>%</u>	<u>white</u>	<u>\$15,000</u>	<u>to</u>	<u>and</u>
				<u>%</u>	<u>%</u>	<u>%</u>		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Bus	22	37	11	39	8	21	15	*	42	16	10
Auto	98	95	100	94	100	100	99	*	94	100	100
Other mode of transit	1	2	-	3	-	-	1	*	-	3	-
	N =(105)	(43)	(62)	(36)	(40)	(29)	(93)	(12)	(33)	(31)	(41)

A-18

*Percentages not reported because sample size was less than 25.

**Columns add to more than 100% due to multiple responses.

Table A-19

MODE OF TRANSPORTATION USED MOST OFTEN BY PERSONS FOR
NON-WORK PURPOSES IN THE SUBURBS BY DEMOGRAPHIC SEGMENTS

Percent reporting most frequent use of:	Total	Sex		Age			Race		Income		
		Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
Bus	7	14	2	17	-	3	3	*	18	3	-
Auto	93	86	98	83	100	97	97	*	82	97	100
Both bus and auto	-	-	-	-	-	-	-	-	-	-	-
Other mode of transit	-	-	-	-	-	-	-	-	-	-	-
N	(105)	(43)	(62)	(36)	(40)	(29)	(93)	(12)	(33)	(31)	(41)

A-19

*Percentages not reported because sample size was less than 25.

Table A-20

MINUTES REQUIRED TO GET TO SUBURBS FOR NON-WORK PURPOSES
BY MOST OFTEN USED MODE OF TRANSPORTATION BY
DEMOGRAPHIC SEGMENTS

Percent reporting average trip lengths of:	Sex			Age			Race		Income		
	Total %	Male %	Female %	18 to 34 %	35 to 49 %	50 or over %	White %	Non- white %	Under \$15,000 %	\$15,000 to \$24,999 %	\$25,000 and over %
15 minutes or less	59	51	64	47	68	62	64	*	52	55	68
16 to 20 minutes	22	21	23	25	20	21	22	*	18	26	22
21 to 30 minutes	12	16	10	14	10	14	11	*	18	13	7
More than 30 minutes	7	12	3	14	2	3	3	*	12	6	2
Mean	18.3	21.1	16.4	20.9	16.2	18.1	17.3	*	20.1	19.3	16.2
N =	(105)	(43)	(62)	(36)	(40)	(29)	(93)	(12)	(33)	(31)	(41)

A-20

*Percentages not reported because sample size was less than 25.

Table A-21

AVERAGE NUMBER OF TRIPS PER MONTH FOR NON-WORK
PURPOSES IN SUBURBS BY DEMOGRAPHIC SEGMENTS

	<u>Sex</u>			<u>Age</u>			<u>Race</u>		<u>Income</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>18 to</u>	<u>35 to</u>	<u>50 or</u>	<u>White</u>	<u>Non-</u>	<u>Under</u>	<u>\$15,000</u>	<u>\$25,000</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>34</u>	<u>49</u>	<u>over</u>	<u>%</u>	<u>white</u>	<u>\$15,000</u>	<u>to</u>	<u>and</u>
				<u>%</u>	<u>%</u>	<u>%</u>		<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
1 per month	8	9	6	8	8	7	9	*	9	13	2
2 per month	12	12	13	11	15	10	12	*	9	13	15
3 to 5 per month	30	37	24	39	18	34	28.	*	33	23	32
6 to 10 per month	31	33	31	25	35	34	33	*	30	39	27
11 or more per month	19	9	26	17	25	14	18	*	18	13	24
Mean	7.6	6.4	8.4	8.1	8.1	6.0	7.2	*	8.8	5.7	8.0
N =	(105)	(43)	(62)	(36)	(40)	(29)	(93)	(12)	(33)	(31)	(41)

A-21

*Percentages not reported because sample size was less than 25.

Table A-22

WILLINGNESS TO PAY \$.35 FOR ONE-WAY TRIP ON AGT
BY DEMOGRAPHIC SEGMENTS

		<u>Sex</u>		<u>Age</u>			<u>Race</u>		<u>Income</u>		
	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>18 to</u>	<u>35 to</u>	<u>50 or</u>	<u>White</u>	<u>Non-</u>	<u>Under</u>	<u>\$15,000</u>	<u>\$25,000</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>34</u>	<u>49</u>	<u>over</u>	<u>%</u>	<u>white</u>	<u>\$15,000</u>	<u>to</u>	<u>and</u>
				<u>%</u>	<u>%</u>	<u>%</u>		<u>%</u>	<u>%</u>	<u>\$24,999</u>	<u>over</u>
Willing to pay \$.35 for a one-way trip on AGT	76	82	72	77	76	78	79	62	72	73	84
Not willing to pay \$.35 for a one-way trip on AGT	23	18	28	23	24	22	21	38	28	27	16
Approximate N =(546) (252) (294) (223) (196) (126) (468) (78) (166) (198) (177)											

Table A-23

WILLINGNESS TO PAY \$.35 FOR ONE-WAY TRIP ON AGT
BY PURPOSE/DESTINATION STRATA

<u>Percent indicating that they are:</u>	<u>Total</u> %	<u>Work/Downtown</u>		<u>Work/ Suburban</u> %	<u>Non-work/ Downtown</u> %	<u>Non-work/ Suburban</u> %
		<u>Bus Users</u> %	<u>Car Users</u> %			
Willing to pay \$.35 for a one-way trip on AGT	76	75	72	79	80	72
Not willing to pay \$.35 for a one-way trip on AGT	23	25	28	21	20	28
Approximate N =	(546)	(84)	(91)	(99)	(168)	(105)

A-23

Table A-24

WILLINGNESS TO PAY \$.35 FOR ONE-WAY TRIP ON AGT
BY DEMOGRAPHIC AND PURPOSE/DESTINATION SEGMENTS

Percent of each Purpose/ Destination stratum willing to pay \$.35:	Sex			Age			Race		Income		
	Total	Male	Female	18 to 34	35 to 49	50 or over	White	Non- white	Under \$15,000	\$15,000 to \$24,999	\$25,000 and over
	%	%	%	%	%	%	%	%	%	%	%
Work/downtown	74	82	67	71	71	85	79	*	70	69	84
Work/suburban	79	88	71	88	71	74	80	*	83	73	83
Non-work/downtown	80	82	79	83	82	71	84	*	72	78	90
Non-work/suburban	72	77	69	64	75	79	71	*	67	71	78
Approximate N =(546) (252) (294) (223) (196) (126) (468) (78) (166) (198) (177)											

*Percentages not reported due to small per-cell sample size.

APPENDIX B :

SURVEY INSTRUMENTS

- Screening Form
- Questionnaires (Versions 1 to 4)
- Sort Cards
- Script

NATIONAL ANALYSTS
A Division of Booz·Allen &
Hamilton Inc.

Transit Study
- Screening Form -

Study #: 1-016
OMB #: 004-S79001
Expires: Sept., 1979

INTRODUCTION: Hello, I'm _____, representing National Analysts, a survey research firm located in Philadelphia, PA. We are conducting a survey in the Atlanta area for the U.S. Department of Transportation under the Urban Mass Transportation Act. The purpose of the survey is to gather information on people's attitudes toward public transit, which will be used to evaluate several forms of public transportation. This information will be used for statistical purposes only. Your participation in this important study is entirely voluntary, and, should you choose not to participate, there is no penalty to you. Your answers will remain strictly confidential.

- ①. Do you have an automobile available for your use? This includes owning a car, leasing a car, or having a business or government car available to you.

11

CONTINUE	Yes	1
TERMINATE SCREENING	No	2

- ②. Do you work in the downtown area of the city, that is, where there is a concentration of business establishments, shops, hotels and the like, or do you work in the outskirts of the city or in a suburb around the city?

12

	Work downtown	1
	Work outskirts of city	2
	Work in suburbs	3
SKIP TO Q.4	Do not work	4

3. What mode of transportation do you use most often to get to work?

13

CIRCLE
ONLY ONE
CODE

Bus	1
Auto	2
Other: SPECIFY _____	0

- ④. How often do you go to the downtown area of the city for shopping, leisure or recreational events? Would you say:

14

Once a week or more,	1
Not once a week, but at least once a month, or	2
Less than once a month?	3

5. What mode of transportation do you use most often to go to the downtown area of the city for shopping, leisure or recreational events?

CIRCLE ONLY
ONE CODE

Bus	1
Auto	2
Other: SPECIFY _____	0

6. How often do you go to a major shopping center or recreational facility in the outskirts or suburbs around the city for shopping, leisure or recreational events? Would you say:

Once a week or more,	1
Not once a week, but at least once a month, or	2
Less than once a month?	3

7. What mode of transportation do you use most often to go to a major shopping center or recreational facility in the outskirts or suburbs around the city for shopping, leisure or recreational events?

CIRCLE ONLY
ONE CODE

Bus	1
Auto	2
Other: SPECIFY _____	0

8. What is your age?

ENTER # OF YEARS: _____
18, 19

9. What is your sex?

Male	1
Female	2

10. What is your race?

White	1
Black	2
Other: SPECIFY _____	0

11. What was your total household income before taxes and other deductions last year, that is in 1978? Was it:

Under \$5,000,	1
\$5,000 - \$9,999,	2
\$10,000 - \$14,999,	3
\$15,000 - \$19,999,	4
\$20,000 - \$24,999,	5
\$25,000 - \$29,999,	6
\$30,000 - \$49,999, or	7
\$50,000 and over	8

22

RECRUIT ELIGIBLE PERSONS FOR FULL INTERVIEW ACCORDING TO THESE GROUPS:

A.	PERSONS WHO WORK IN DOWNTOWN AND USE BUSES TO GET THERE	→ Q.2 - CODE 1 <u>AND</u> Q.3 - CODE 1	USE VERSION 1
B.	PERSONS WHO WORK IN DOWNTOWN AND USE AUTO TO GET THERE	→ Q.2 - CODE 1 <u>AND</u> Q.3 - CODE 2	USE VERSION 2
C.	PERSONS WHO WORK IN OUTSKIRTS OR SUBURBS AROUND CITY	→ Q.2 - CODES 2 <u>OR</u> 3	USE VERSION 3
D.	PERSONS WHO SHOP/LEISURE IN DOWNTOWN AT LEAST ONCE A MONTH OR MORE OFTEN	→ Q.4 - CODES 1 <u>OR</u> 2	USE VERSION 4
E.	PERSONS WHO SHOP/LEISURE IN OUTSKIRTS OR SUBURBS AT LEAST ONCE A MONTH OR MORE OFTEN	→ Q.6 - CODES 1 <u>OR</u> 2	USE VERSION 4

RECORD GROUP LETTER HERE: _____ INTERVIEW DATE/TIME: _____

23

Respondent's Name: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Telephone #: _____

24

DATE OF SCREENING: _____ INTERVIEWER'S NAME: _____

End Card 01

NATIONAL ANALYSTS
A Division of Booz.Allen &
Hamilton Inc.

Study #: 1-016
OMB#: 004-S79001
Expires: Sept., 1979

TRANSIT STUDY

This survey is being conducted by National Analysts, a survey research firm located in Philadelphia, PA. The survey is being conducted in the Atlanta area for the U.S. Department of Transportation, under the Urban Mass Transportation Act. The purpose of the survey is to gather data about people's attitudes toward public transit, which will be used to evaluate several forms of public transportation. This information will be used for statistical purposes only. Your participation in this important survey is entirely voluntary, and, should you choose not to participate, there is no penalty to you. Your answers will remain strictly confidential.

12~15	16	
Time Began: _____	A.M.	1
	P.M.	2
17~20	21	
Time Ended: _____	A.M.	1
	P.M.	2

Name: _____

Street Address: _____

Date: _____ / _____ / _____
MONTH DAY YEAR
22, 23 24, 25

PLEASE TURN THE PAGE
AND BEGIN READING

- ①. The purpose of this research study is to get your reactions to different types or modes of public transit. We will give you a set of cards which describe particular transit types or modes and ask you to rate each one. After you rate the cards, a few more questions will be asked.

Each transit mode we want you to rate has a variety of different features. When it comes to the specific features of transit modes, different people have different needs. We want you to think about what you would do if you were making a trip to the downtown area of the city, that is, where there is a concentration of business establishments, shops, hotels, etc., for the purpose of getting to work. Imagine you are making this trip by automobile and it takes 30 minutes. We will ask you to decide how likely it is that you would use the transit mode described to you for this purpose.

IN FRONT OF YOU ARE TWO SETS OF CARDS AND
A SORT BOARD. PICK UP ONE SET OF CARDS
AND WAIT FOR FURTHER EXPLANATION.

ONCE THE FEATURES HAVE BEEN EXPLAINED TO YOU,
TURN THE PAGE AND CONTINUE READING.

The Sort Board

Look at the Sort Board in front of you. It is a piece of cardboard with five squares drawn on it. The squares are numbered from "1" to "5" to represent the five possible ratings you can give to a transit mode. Square number "5" is where you place the cards describing the transit modes which you would be "most likely to use". Square number "1" is where you place the cards describing the transit mode you would be "least likely to use". The squares marked "2", "3", and "4" are where you place the cards that you wish to rate somewhere between "1" and "5".

How to Place the Cards on the Sort Board

First, look at the cards briefly. You can see that some of the cards describe similar transit modes, but that no two cards are exactly alike. Imagine that you are making a trip to the downtown area of the city for the purpose of getting to work. Imagine you are making this trip by automobile and it takes 30 minutes. How likely is it that you would take each of the transit modes? As you decide on the ratings for each card, place that card on the appropriate square on the Sort Board.

Keep in mind these rules when placing the cards on the Sort Board:

1. All 16 cards must be placed on the Sort Board.
2. You may place as many or as few cards as you wish on any of the five squares.
3. Rate the transit mode only according to the features described on the cards. Assume that all features that are not listed on the cards are identical for all transit modes.

NOW RATE ALL 16 DESCRIPTIONS BY PLACING EACH ON ONE OF THE FIVE SQUARES. WHEN YOU FINISH PLACING ALL 16, TURN TO THE NEXT PAGE AND RECORD YOUR RATINGS BY LISTING THE CARD NUMBERS IN THE APPROPRIATE COLUMNS.

RATING SHEET (Q.1)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	12 Of- fice Use Only
					13-14
					15-16
					17-18
					19-20
					21-22
					23-24
					25-26
					27-28
					29-30
					31-32
					33-34
					35-36
					37-38
					39-40
					41-42
					43-44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER
BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

2. How many persons are there in your household, including yourself?

NUMBER IN HOUSEHOLD: 26, 27

3. What was the last grade in school you completed?

28

8th grade or less	1
Some high school (9-11)	2
Completed high school (12)	3
Some college	4
Graduated college or beyond	5

4. Which one of these best describes your current occupation? (CIRCLE ONE AND ONLY ONE CODE)

29

<u>Professional and Technical</u> : (Examples: Accountants; computer programmers; civil, chemical, electrical engineers; lawyers; doctors; registered nurses; scientists; teachers; artists; clergy; religious education workers; etc.)	1
<u>Managers, Officers and Proprietors</u> : (Examples: Department heads; sales managers; administrators; executive buyers; company officers; etc.)	2
<u>Farmers</u> (owners and managers)	3
<u>Clerical or Sales Workers</u> : (Examples: Bank tellers; mail carriers; office machine operators; clerical workers; secretaries; sales persons; insurance and real estate agents; etc.)	4
<u>Craftsmen and Foremen</u> : (Examples: Carpenters; electricians; road equipment operators; mechanics and repairmen; painters; plumbers; telephone installers; tool and die makers; etc.)	5
<u>Operatives</u> : (Examples: gas station attendants; bus, taxi, and truck drivers; food graders and packers; meat cutters; laundry operatives; etc.)	6
<u>Service Workers and Other Similar Jobs</u> : (Examples: Restaurant workers; janitors; car washers; groundskeepers; farm workers; laborers; etc.)	7
<u>Homemakers; student; military service; retired</u>	8
Some other occupation: Specify _____	0

PLEASE TURN PAGE AND CONTINUE READING

PICK UP THE SECOND SET OF CARDS
AND READ THE INSTRUCTIONS BELOW

5. The next step is for you to rate the second set of descriptions in the same way you rated the first set. As you decide on a rating for each card, place that card on the appropriate square on the Sort Board.

Keep in mind the same rules you used before:

1. All 16 cards must be placed on the Sort Board.
2. You may place as many or as few as you wish on any of the five squares.
3. Rate the transit modes only according to the features described on the cards. Assume that all features that are not listed on the cards are identical for all transit modes.

NOW RATE ALL 16 DESCRIPTIONS
BY PLACING EACH ON ONE OF THE
FIVE SQUARES. WHEN YOU FINISH
PLACING ALL 16, TURN TO THE NEXT
PAGE AND RECORD YOUR RATINGS BY
LISTING THE CARD NUMBERS IN THE
APPROPRIATE COLUMNS.

RATING SHEET (Q.5)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	Of- ¹² fice Use Only
					13, 14
					15, 16
					17, 18
					19, 20
					21, 22
					23, 24
					25, 26
					27, 28
					29, 30
					31, 32
					33, 34
					35, 36
					37, 38
					39, 40
					41, 42
					43, 44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER
BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

6. What mode or modes of transportation do you use to get to work?
CIRCLE AS MANY AS APPLY.

30	
Bus	1
Auto	2
Other: SPECIFY _____ _____	0

IF MORE THAN ONE MODE OF TRANSPORTATION CIRCLED
IN Q.6 ANSWER Q.7, OTHERWISE SKIP TO Q.8

7. What mode of transportation do you use most often to get to work?
CIRCLE ONLY ONE.

31	
Bus	1
Auto	2
Other: SPECIFY _____ _____	0

8. Thinking now of the mode of transportation you use most often to get to work, approximately how many minutes does it usually take you?

NUMBER OF MINUTES: _____
32-34

IF AUTO IS ONE OF THE MODES OF TRANSPORTATION USED,
BUT NOT THE MOST OFTEN MODE USED, ANSWER Q.9,
OTHERWISE SKIP TO Q.10

9. Approximately how many minutes would it usually take for you to get to work using an automobile?

NUMBER OF MINUTES: _____
35-37

10. How many times per week do you travel to and from work? Count each round trip, that is, to and from work on one day, as one time.

NUMBER TIMES PER WEEK: _____
38, 39

11. If you were making a 30-minute trip to the downtown area of the city for the purpose of getting to work, would you be willing to pay \$.35 for a one-way trip on AGT?

SKIP TO Q.13

CONTINUE

Yes	1
No	2

40

12. Would you be willing to pay \$.15 for this trip on AGT?

Yes	1
No	2

41

13. People often consider different factors in their selection of public transportation. Some of these may be more important than others. For each of the factors listed below, circle one number on the scale which represents how important that factor is to you in your selection of public transportation. If you circle a "1" it means that factor is not at all important to you. If you circle a "5" it means that factor is very important to you. A "2", "3" or "4" means you are somewhere in between.

		Not at All Important				Very Important
Guarantee of a seat	42	1	2	3	4	5
A comfortable seat	43	1	2	3	4	5
Size of vehicle	44	1	2	3	4	5
Frequency of service	45	1	2	3	4	5
Attendants or drivers on vehicle	46	1	2	3	4	5
Price	47	1	2	3	4	5
Transit mode	48	1	2	3	4	5
Covered or enclosed bus stops/ station entrances and exits	49	1	2	3	4	5
Travel time	50	1	2	3	4	5
Distance of bus stop/station from your home	51	1	2	3	4	5
Attendants inside stations	52	1	2	3	4	5
Distance of bus stop/station from your destination	53	1	2	3	4	5
Quality of ride, that is, noise level, smoothness and the like	54	1	2	3	4	5
Well lit bus stops/station entrances, platforms, and exits	55	1	2	3	4	5

14. Think now of the reliability of the four types of public transportation, that is, their potential for meeting time schedules, possible breakdowns and the like. For each type of transportation, circle one number on the scale from "1" to "5", with "1" being very unreliable and "5" being very reliable, that comes closest to your view of that type of public transportation's reliability.

		Very Unreliable			Very Reliable	
Rail	56	1	2	3	4	5
Local Bus	57	1	2	3	4	5
Express Bus	58	1	2	3	4	5
AGT	59	1	2	3	4	5

15. If you had to make a choice, would you prefer a rail or automated guideway transit (AGT) system that was:

	60
Above ground,	1
Below ground, or	2
On ground level?	3

16. Why do you feel this way? What factors contribute to your preference?

	61
	62
	63
	64

17. If you had to make a choice on the size of vehicle in which to ride public transit, would you prefer one that holds:

	65
4 to 6 passengers,	1
10 passengers,	2
30 passengers, or	3
50 or more passengers?	4

18. Why do you feel this way? Why is this size vehicle better than other sizes?

66

67

68

69

19. Aside from driving the vehicle, what other functions do you feel drivers or other attendants provide on public transit?

70

71

72

73

20. Thinking now of all the times you have taken public transportation, have you ever ridden on a:

CIRCLE EITHER A
YES OR NO CODE
FOR EACH

	Yes	No
Rail System? 74	1	2
Local Bus System? 75	1	2
Express Bus System? 76	1	2
AGT System? 77	1	2

21. Thinking of the four ~~types~~ of public transportation we have been talking about, which mode do you prefer most?

78

CIRCLE ONLY
ONE

Rail	1
Local Bus	2
Express Bus	3
AGT	4

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12~15 Time Began: _____	A.M. ¹⁶	1
	P.M.	2
17~20 Time Ended: _____	A.M. ²¹	1
	P.M.	2

Name: _____

Street Address: _____

Date: _____
 MONTH / DAY / YEAR

22-23 24-25

PLEASE TURN THE PAGE
AND BEGIN READING

1. The purpose of this research study is to get your reactions to different types or modes of public transit. We will give you a set of cards which describe particular transit types or modes and ask you to rate each one. After you rate the cards, a few more questions will be asked.

Each transit mode we want you to rate has a variety of different features. When it comes to the specific features of transit modes, different people have different needs. We want you to think about what you would do if you were making a trip to the outskirts or suburbs around the city for the purpose of getting to work. Imagine you are making this trip by automobile and it takes 30 minutes. We will ask you to decide how likely it is that you would use the transit mode described to you for this purpose.

IN FRONT OF YOU ARE TWO SETS OF CARDS AND
A SORT BOARD. PICK UP ONE SET OF CARDS
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TURN THE PAGE AND CONTINUE READING.

The Sort Board

Look at the Sort Board in front of you. It is a piece of cardboard with five squares drawn on it. The squares are numbered from "1" to "5" to represent the five possible ratings you can give to a transit mode. Square number "5" is where you place the cards describing the transit modes which you would be "most likely to use". Square number "1" is where you place the cards describing the transit mode you would be "least likely to use". The squares marked "2", "3", and "4" are where you place the cards that you wish to rate somewhere between "1" and "5".

How to Place the Cards on the Sort Board

First, look at the cards briefly. You can see that some of the cards describe similar transit modes, but that no two cards are exactly alike. Imagine that you are making a trip to the outskirts or suburbs around the city for the purpose of getting to work. Imagine you are making this trip by automobile and it takes 30 minutes. How likely is it that you would take each of the transit modes? As you decide on the ratings for each card, place that card on the appropriate square on the Sort Board.

Keep in mind these rules when placing the cards on the Sort Board:

1. All 16 cards must be placed on the Sort Board.
2. You may place as many or as few cards as you wish on any of the five squares.
3. Rate the transit mode only according to the features described on the cards. Assume that all features that are not listed on the cards are identical for all transit modes.

NOW RATE ALL 16 DESCRIPTIONS BY PLACING EACH ON ONE OF THE FIVE SQUARES. WHEN YOU FINISH PLACING ALL 16, TURN TO THE NEXT PAGE AND RECORD YOUR RATINGS BY LISTING THE CARD NUMBERS IN THE APPROPRIATE COLUMNS.

RATING SHEET (0.1)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	Of 12 Use Only
					13, 14
					15, 16
					17, 18
					19, 20
					21, 22
					23, 24
					25, 26
					27, 28
					29, 30
					31, 32
					33, 34
					35, 36
					37, 38
					39, 40
					41, 42
					43, 44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

2. How many persons are there in your household, including yourself?

NUMBER IN HOUSEHOLD: _____

26, 27

3. What was the last grade in school you completed?

28

8th grade or less	1
Some high school (9-11)	2
Completed high school (12)	3
Some college	4
Graduated college or beyond	5

4. Which one of these best describes your current occupation? (CIRCLE ONE AND ONLY ONE CODE)

29

<u>Professional and Technical:</u> (Examples: Accountants; computer programmers; civil, chemical, electrical engineers; lawyers; doctors; registered nurses; scientists; teachers; artists; clergy; religious education workers; etc.)	1
<u>Managers, Officers and Proprietors:</u> (Examples: Department heads; sales managers; administrators; executive buyers; company officers; etc.)	2
<u>Farmers</u> (owners and managers)	3
<u>Clerical or Sales Workers:</u> (Examples: Bank tellers; mail carriers; office machine operators; clerical workers; secretaries; sales persons; insurance and real estate agents; etc.)	4
<u>Craftsmen and Foremen:</u> (Examples: Carpenters; electricians; road equipment operators; mechanics and repairmen; painters; plumbers; telephone installers; tool and die makers; etc.)	5
<u>Operatives:</u> (Examples: Gas station attendants; bus, taxi, and truck drivers; food graders and packers; meat cutters; laundry operatives; etc.)	6
<u>Service Workers and Other Similar Jobs:</u> (Examples: Restaurant workers; janitors; car washers; groundskeepers; farm workers; laborers; etc.)	7
<u>Homemakers; student; military service; retired</u>	8
Some other occupation: Specify _____	0

PLEASE TURN PAGE AND CONTINUE READING

PICK UP THE SECOND SET OF CARDS
AND READ THE INSTRUCTIONS BELOW

5. The next step is for you to rate the second set of descriptions in the same way you rated the first set. As you decide on a rating for each card, place that card on the appropriate square on the Sort Board.

Keep in mind the same rules you used before:

1. All 16 cards must be placed on the Sort Board.
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NOW RATE ALL 16 DESCRIPTIONS
BY PLACING EACH ON ONE OF THE
FIVE SQUARES. WHEN YOU FINISH
PLACING ALL 16, TURN TO THE NEXT
PAGE AND RECORD YOUR RATINGS BY
LISTING THE CARD NUMBERS IN THE
APPROPRIATE COLUMNS.

RATING SHEET (Q.5)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	Of- ¹² fice Use Only
					13,14
					15,16
					17,18
					19,20
					21,22
					23,24
					25,26
					27,28
					29,30
					31,32
					33,34
					35,36
					37,38
					39,40
					41,42
					43,44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

6. What mode or modes of transportation do you use to get to work?
CIRCLE AS MANY AS APPLY.

Bus	1
Auto	2
Other: SPECIFY _____ _____	0

IF MORE THAN ONE MODE OF TRANSPORTATION CIRCLED
IN Q.6 ANSWER Q.7, OTHERWISE SKIP TO Q.8

7. What mode of transportation do you use most often to get to work?
CIRCLE ONLY ONE.

Bus	1
Auto	2
Other: SPECIFY _____ _____	0

8. Thinking now of the mode of transportation you use most often to get to work, approximately how many minutes does it usually take you?

NUMBER OF MINUTES: _____
32-34

IF AUTO IS ONE OF THE MODES OF TRANSPORTATION USED,
BUT NOT THE MOST OFTEN MODE USED, ANSWER Q.9,
OTHERWISE SKIP TO Q.10

9. Approximately how many minutes would it usually take for you to get to work using an automobile?

NUMBER OF MINUTES: _____
35-37

10. How many times per week do you travel to and from work? Count each round trip, that is, to and from work on one day, as one time.

NUMBER TIMES PER WEEK: _____
38, 39

11. If you were making a 30-minute trip to the outskirts or suburbs around the city for the purpose of getting to work, would you be willing to pay \$.35 for a one-way trip on AGT?

SKIP TO Q.13

Yes	1
No	2

CONTINUE

12. Would you be willing to pay \$.15 for this trip on AGT?

Yes	1
No	2

13. People often consider different factors in their selection of public transportation. Some of these may be more important than others. For each of the factors listed below, circle one number on the scale which represents how important that factor is to you in your selection of public transportation. If you circle a "1" it means that factor is not at all important to you. If you circle a "5" it means that factor is very important to you. A "2", "3" or "4" means you are somewhere in between.

	Not at All Important				Very Important
Guarantee of a seat ⁴²	1	2	3	4	5
A comfortable seat ⁴³	1	2	3	4	5
Size of vehicle ⁴⁴	1	2	3	4	5
Frequency of service ⁴⁵	1	2	3	4	5
Attendants or drivers on vehicle ⁴⁶	1	2	3	4	5
Price ⁴⁷	1	2	3	4	5
Transit mode ⁴⁸	1	2	3	4	5
Covered or enclosed bus stops/ station entrances and exits ⁴⁹	1	2	3	4	5
Travel time ⁵⁰	1	2	3	4	5
Distance of bus stop/station from your home ⁵¹	1	2	3	4	5
Attendants inside stations ⁵²	1	2	3	4	5
Distance of bus stop/station from your destination ⁵³	1	2	3	4	5
Quality of ride, that is, noise level, smoothness and the like ⁵⁴	1	2	3	4	5
Well lit bus stops/station entrances, platforms, and exits ⁵⁵	1	2	3	4	5

14. Think now of the reliability of the four types of public transportation, that is, their potential for meeting time schedules, possible breakdowns and the like. For each type of transportation, circle one number on the scale from "1" to "5", with "1" being very unreliable and "5" being very reliable, that comes closest to your view of that type of public transportation's reliability.

		Very Unreliable			Very Reliable	
Rail	56	1	2	3	4	5
Local Bus	57	1	2	3	4	5
Express Bus	58	1	2	3	4	5
AGT	59	1	2	3	4	5

15. If you had to make a choice, would you prefer a rail or automated guideway transit (AGT) system that was:

	60
Above ground,	1
Below ground, or	2
On ground level?	3

16. Why do you feel this way? What factors contribute to your preference?

61
62
63
64

17. If you had to make a choice on the size of vehicle in which to ride public transit, would you prefer one that holds:

	65
4 to 6 passengers,	1
10 passengers,	2
30 passengers, or	3
50 or more passengers?	4

18. Why do you feel this way? Why is this size vehicle better than other sizes?

66

67

68

69

19. Aside from driving the vehicle, what other functions do you feel drivers or other attendants provide on public transit?

70

71

72

73

20. Thinking now of all the times you have taken public transportation, have you ever ridden on a:

CIRCLE EITHER A
YES OR NO CODE
FOR EACH

	Yes	No
Rail System? 74	1	2
Local Bus System? 75	1	2
Express Bus System? 76	1	2
AGT System? 77	1	2

21. Thinking of the four types of public transportation we have been talking about, which mode do you prefer most?

78

CIRCLE ONLY
ONE

Rail	1
Local Bus	2
Express Bus	3
AGT	4

NATIONAL ANALYSTS
A Division of Booz.Allen &
Hamilton Inc.

Study #: 1-016
OMB#: 004-S79001
Expires: Sept., 1979

TRANSIT STUDY

This survey is being conducted by National Analysts, a survey research firm located in Philadelphia, PA. The survey is being conducted in the Atlanta area for the U.S. Department of Transportation, under the Urban Mass Transportation Act. The purpose of the survey is to gather data about people's attitudes toward public transit, which will be used to evaluate several forms of public transportation. This information will be used for statistical purposes only. Your participation in this important survey is entirely voluntary, and, should you choose not to participate, there is no penalty to you. Your answers will remain strictly confidential.

12~15	15	
Time Began: _____	A.M.	1
	P.M.	2
17~20	21	
Time Ended: _____	A.M.	1
	P.M.	2

Name: _____

Street Address: _____

Date: _____
 MONTH / DAY / YEAR

22-23

24-25

PLEASE TURN THE PAGE
AND BEGIN READING

1. The purpose of this research study is to get your reactions to different types or modes of public transit. We will give you a set of cards which describe particular transit types or modes and ask you to rate each one. After you rate the cards, a few more questions will be asked.

Each transit mode we want you to rate has a variety of different features. When it comes to the specific features of transit modes, different people have different needs. We want you to think about what you would do if you were making a trip to the downtown area of the city, that is, where there is a concentration of business establishments, shops, hotels, etc., for shopping, recreation or some other non-work purpose. Imagine you are making this trip by automobile and it takes 30 minutes. We will ask you to decide how likely it is that you would use the transit mode described to you for this purpose.

IN FRONT OF YOU ARE TWO SETS OF CARDS AND
A SORT BOARD. PICK UP ONE SET OF CARDS
AND WAIT FOR FURTHER EXPLANATION.

ONCE THE FEATURES HAVE BEEN EXPLAINED TO YOU,
TURN THE PAGE AND CONTINUE READING.

The Sort Board

Look at the Sort Board in front of you. It is a piece of cardboard with five squares drawn on it. The squares are numbered from "1" to "5" to represent the five possible ratings you can give to a transit mode. Square number "5" is where you place the cards describing the transit modes which you would be "most likely to use". Square number "1" is where you place the cards describing the transit mode you would be "least likely to use". The squares marked "2", "3", and "4" are where you place the cards that you wish to rate somewhere between "1" and "5".

How to Place the Cards on the Sort Board

First, look at the cards briefly. You can see that some of the cards describe similar transit modes, but that no two cards are exactly alike. Imagine that you are making a trip to the downtown area of the city for shopping, recreation or some other non-work purpose. Imagine you are making this trip by automobile and it takes 30 minutes. How likely is it that you would take each of the transit modes? As you decide on the ratings for each card, place that card on the appropriate square on the Sort Board.

Keep in mind these rules when placing the cards on the Sort Board:

1. All 16 cards must be placed on the Sort Board.
2. You may place as many or as few cards as you wish on any of the five squares.
3. Rate the transit mode only according to the features described on the cards. Assume that all features that are not listed on the cards are identical for all transit modes.

NOW RATE ALL 16 DESCRIPTIONS BY PLACING EACH ON ONE OF THE FIVE SQUARES. WHEN YOU FINISH PLACING ALL 16, TURN TO THE NEXT PAGE AND RECORD YOUR RATINGS BY LISTING THE CARD NUMBERS IN THE APPROPRIATE COLUMNS.

RATING SHEET (Q.1)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	Of- ¹² fice Use Only
					13, 14
					15, 16
					17, 18
					19, 20
					21, 22
					23, 24
					25, 26
					27, 28
					29, 30
					31, 32
					33, 34
					35, 36
					37, 38
					39, 40
					41, 42
					43, 44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER
BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

2. How many persons are there in your household, including yourself?

NUMBER IN HOUSEHOLD: 26, 27

3. What was the last grade in school you completed?

28

8th grade or less	1
Some high school (9-11)	2
Completed high school (12)	3
Some college	4
Graduated college or beyond	5

4. Which one of these best describes your current occupation? (CIRCLE ONE AND ONLY ONE CODE)

29

<u>Professional and Technical:</u> (Examples: Accountants; computer programmers; civil, chemical, electrical engineers; lawyers; doctors; registered nurses; scientists; teachers; artists; clergy; religious education workers; etc.)	1
<u>Managers, Officers and Proprietors:</u> (Examples: Department heads; sales managers; administrators; executive buyers; company officers; etc.)	2
<u>Farmers</u> (owners and managers)	3
<u>Clerical or Sales Workers:</u> (Examples: Bank tellers; mail carriers; office machine operators; clerical workers; secretaries; sales persons; insurance and real estate agents; etc.)	4
<u>Craftsmen and Foremen:</u> (Examples: Carpenters; electricians; road equipment operators; mechanics and repairmen; painters; plumbers; telephone installers; tool and die makers; etc.)	5
<u>Operatives:</u> (Examples: Gas station attendants; bus, taxi, and truck drivers; food graders and packers; meat cutters; laundry operatives; etc.)	6
<u>Service Workers and Other Similar Jobs:</u> (Examples: Restaurant workers; janitors; car washers; groundskeepers; farm workers; laborers; etc.)	7
<u>Homemakers; student; military service; retired</u>	8
Some other occupation: Specify _____	0

PLEASE TURN PAGE AND CONTINUE READING

PICK UP THE SECOND SET OF CARDS
AND READ THE INSTRUCTIONS BELOW

5. The next step is for you to rate the second set of descriptions in the same way you rated the first set. As you decide on a rating for each card, place that card on the appropriate square on the Sort Board.

Keep in mind the same rules you used before:

1. All 16 cards must be placed on the Sort Board.
2. You may place as many or as few as you wish on any of the five squares.
3. Rate the transit modes only according to the features described on the cards. Assume that all features that are not listed on the cards are identical for all transit modes.

NOW RATE ALL 16 DESCRIPTIONS
BY PLACING EACH ON ONE OF THE
FIVE SQUARES. WHEN YOU FINISH
PLACING ALL 16, TURN TO THE NEXT
PAGE AND RECORD YOUR RATINGS BY
LISTING THE CARD NUMBERS IN THE
APPROPRIATE COLUMNS.

B-32

RATING SHEET (0.5)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	Of 12 face Use Only
					13, 14
					15, 16
					17, 18
					19, 20
					21, 22
					23, 24
					25, 26
					27, 28
					29, 30
					31, 32
					33, 34
					35, 36
					37, 38
					39, 40
					41, 42
					43, 44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER
BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

6. What mode or modes of transportation do you use to ~~get~~ go shopping, to get to recreational events and other non-work related places in the downtown area of the city?

CIRCLE AS MANY AS APPLY

Bus	1
Auto	2
Other: SPECIFY _____ _____	0

IF MORE THAN ONE MODE OF TRANSPORTATION CIRCLED
IN Q.6 ANSWER Q.7, OTHERWISE SKIP TO Q.8

7. What mode of transportation do you use most often to go shopping, to get to recreational events and other non-work related places in the downtown area of the city?

CIRCLE ONLY ONE.

Bus	1
Auto	2
Other: SPECIFY _____ _____	0

8. Thinking now of the mode of transportation you use most often to get to the downtown area of the city for shopping and recreation, approximately how many minutes does it usually take you?

NUMBER OF MINUTES: _____
32-34

IF AUTO IS ONE OF THE MODES OF TRANSPORTATION USED,
BUT NOT THE MOST OFTEN MODE USED, ANSWER Q.9,
OTHERWISE SKIP TO Q.10

9. Approximately how many minutes would it usually take for you to get to the downtown area of the city for shopping or recreation using an automobile?

NUMBER OF MINUTES: _____

10. On the average, how many times per month do you go shopping, to recreational events and the like in the downtown area of the city? Count each round trip, that is, to and from shopping, as one time.

NUMBER OF TIMES PER MONTH: _____
35-37
38, 39

11. If you were making a 30-minute trip to the downtown area of the city for shopping, recreation or some other non-work purpose, would you be willing to pay \$.35 for a one-way trip on AGT?

SKIP TO Q.13

CONTINUE

Yes	1
No	2

12. Would you be willing to pay \$.15 for this trip on AGT?

Yes	1
No	2

13. People often consider different factors in their selection of public transportation. Some of these may be more important than others. For each of the factors listed below, circle one number on the scale which represents how important that factor is to you in your selection of public transportation. If you circle a "1" it means that factor is not at all important to you. If you circle a "5" it means that factor is very important to you. A "2", "3" or "4" means you are somewhere in between.

		Not at All Important				Very Important
Guarantee of a seat	42	1	2	3	4	5
A comfortable seat	43	1	2	3	4	5
Size of vehicle	44	1	2	3	4	5
Frequency of service	45	1	2	3	4	5
Attendants or drivers on vehicle	46	1	2	3	4	5
Price	47	1	2	3	4	5
Transit mode	48	1	2	3	4	5
Covered or enclosed bus stops/ station entrances and exits	49	1	2	3	4	5
Travel time	50	1	2	3	4	5
Distance of bus stop/station from your home	51	1	2	3	4	5
Attendants inside stations	52	1	2	3	4	5
Distance of bus stop/station from your destination	53	1	2	3	4	5
Quality of ride, that is, noise level, smoothness and the like	54	1	2	3	4	5
Well lit bus stops/station entrances, platforms, and exits	55	1	2	3	4	5

14. Think now of the reliability of the four types of public transportation, that is, their potential for meeting time schedules, possible breakdowns and the like. For each type of transportation, circle one number on the scale from "1" to "5", with "1" being very unreliable and "5" being very reliable, that comes closest to your view of that type of public transportation's reliability.

		Very Unreliable			Very Reliable	
Rail	56	1	2	3	4	5
Local Bus	57	1	2	3	4	5
Express Bus	58	1	2	3	4	5
AGT	59	1	2	3	4	5

15. If you had to make a choice, would you prefer a rail or automated guideway transit (AGT) system that was:

60	
Above ground,	1
Below ground, or	2
On ground level?	3

16. Why do you feel this way? What factors contribute to your preference?

61
62
63
64

17. If you had to make a choice on the size of vehicle in which to ride public transit, would you prefer one that holds:

65	
4 to 6 passengers,	1
10 passengers,	2
30 passengers, or	3
50 or more passengers?	4

- (18.) Why do you feel this way? Why is this size vehicle better than other sizes?

66
67

68
69

- (19.) Aside from driving the vehicle, what other functions do you feel drivers or other attendants provide on public transit?

70
71

72
73

- (20.) Thinking now of all the times you have taken public transportation, have you ever ridden on a:

CIRCLE EITHER A
YES OR NO CODE
FOR EACH

	Yes	No
Rail System? 74	1	2
Local Bus System? 75	1	2
Express Bus System? 76	1	2
AGT System? 77	1	2

- (21.) Thinking of the four types of public transportation we have been talking about, which mode do you prefer most?

CIRCLE ONLY
ONE

Rail	1
Local Bus	2
Express Bus	3
AGT	4

NATIONAL ANALYSTS
A Division of Booz.Allen &
Hamilton Inc.

Study #: 1-016
OMB#: 004-S79001
Expires: Sept., 1979

TRANSIT STUDY

This survey is being conducted by National Analysts, a survey research firm located in Philadelphia, PA. The survey is being conducted in the Atlanta area for the U.S. Department of Transportation, under the Urban Mass Transportation Act. The purpose of the survey is to gather data about people's attitudes toward public transit, which will be used to evaluate several forms of public transportation. This information will be used for statistical purposes only. Your participation in this important survey is entirely voluntary, and, should you choose not to participate, there is no penalty to you. Your answers will remain strictly confidential.

12~15	16	
Time Began: _____	A.M.	1
	P.M.	2
17~20	21	
Time Ended: _____	A.M.	1
	P.M.	2

Name: _____

Street Address: _____

Date: _____ / _____ / _____
MONTH DAY YEAR

22-23

24-25

PLEASE TURN THE PAGE
AND BEGIN READING

1. The purpose of this research study is to get your reactions to different types or modes of public transit. We will give you a set of cards which describe particular transit types or modes and ask you to rate each one. After you rate the cards, a few more questions will be asked.

Each transit mode we want you to rate has a variety of different features. When it comes to the specific features of transit modes, different people have different needs. We want you to think about what you would do if you were making a trip to a major shopping center or recreational facility in the outskirts or suburbs around the city for shopping, recreation, or some other non-work purpose. Imagine you are making this trip by automobile and it takes 30 minutes. We will ask you to decide how likely it is that you would use the transit mode described to you for this purpose.

IN FRONT OF YOU ARE TWO SETS OF CARDS AND
A SORT BOARD. PICK UP ONE SET OF CARDS
AND WAIT FOR FURTHER EXPLANATION.

ONCE THE FEATURES HAVE BEEN EXPLAINED TO YOU,
TURN THE PAGE AND CONTINUE READING.

The Sort Board

Look at the Sort Board in front of you. It is a piece of cardboard with five squares drawn on it. The squares are numbered from "1" to "5" to represent the five possible ratings you can give to a transit mode. Square number "5" is where you place the cards describing the transit modes which you would be "most likely to use". Square number "1" is where you place the cards describing the transit mode you would be "least likely to use". The squares marked "2", "3", and "4" are where you place the cards that you wish to rate somewhere between "1" and "5".

How to Place the Cards on the Sort Board

First, look at the cards briefly. You can see that some of the cards describe similar transit modes, but that no two cards are exactly alike. Imagine that you are making a trip to a major shopping center or recreational facility in the outskirts or suburbs around the city for shopping, recreation, or some other non-work purpose. Imagine you are making this trip by automobile and it takes 30 minutes. How likely is it that you would take each of the transit modes? As you decide on the ratings for each card, place that card on the appropriate square on the Sort Board.

Keep in mind these rules when placing the cards on the Sort Board:

1. All 16 cards must be placed on the Sort Board.
2. You may place as many or as few cards as you wish on any of the five squares.
3. Rate the transit mode only according to the features described on the cards. Assume that all features that are not listed on the cards are identical for all transit modes.

NOW RATE ALL 16 DESCRIPTIONS BY PLACING EACH ON ONE OF THE FIVE SQUARES. WHEN YOU FINISH PLACING ALL 16, TURN TO THE NEXT PAGE AND RECORD YOUR RATINGS BY LISTING THE CARD NUMBERS IN THE APPROPRIATE COLUMNS.

RATING SHEET (O.1)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	Of 12 Office Use Only
					13, 14
					15, 16
					17, 18
					19, 20
					21, 22
					23, 24
					25, 26
					27, 28
					29, 30
					31, 32
					33, 34
					35, 36
					37, 38
					39, 40
					41, 42
					43, 44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER
BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

2. How many persons are there in your household, including yourself?

NUMBER IN HOUSEHOLD: _____

26, 27

3. What was the last grade in school you completed?

28

8th grade or less	1
Some high school (9-11)	2
Completed high school (12)	3
Some college	4
Graduated college or beyond	5

4. Which one of these best describes your current occupation? (CIRCLE ONE AND ONLY ONE CODE)

29

<u>Professional and Technical</u> : (Examples: Accountants; computer programmers; civil, chemical, electrical engineers; lawyers; doctors; registered nurses; scientists; teachers; artists; clergy; religious education workers; etc.)	1
<u>Managers, Officers and Proprietors</u> : (Examples: Department heads; sales managers; administrators; executive buyers; company officers; etc.)	2
<u>Farmers</u> (owners and managers)	3
<u>Clerical or Sales Workers</u> : (Examples: Bank tellers; mail carriers; office machine operators; clerical workers; secretaries; sales persons; insurance and real estate agents; etc.)	4
<u>Craftsmen and Foremen</u> : (Examples: Carpenters; electricians; road equipment operators; mechanics and repairmen; painters; plumbers; telephone installers; tool and die makers; etc.)	5
<u>Operatives</u> : (Examples: Gas station attendants; bus, taxi, and truck drivers; food graders and packers; meat cutters; laundry operatives; etc.)	6
<u>Service Workers and Other Similar Jobs</u> : (Examples: Restaurant workers; janitors; car washers; groundskeepers; farm workers; laborers; etc.)	7
<u>Homemakers; student; military service; retired</u>	8
Some other occupation: Specify _____	0

PLEASE TURN PAGE AND CONTINUE READING

PICK UP THE SECOND SET OF CARDS
AND READ THE INSTRUCTIONS BELOW

5. The next step is for you to rate the second set of descriptions in the same way you rated the first set. As you decide on a rating for each card, place that card on the appropriate square on the Sort Board.

Keep in mind the same rules you used before:

1. All 16 cards must be placed on the Sort Board.
2. You may place as many or as few as you wish on any of the five squares.
3. Rate the transit modes only according to the features described on the cards. Assume that all features that are not listed on the cards are identical for all transit modes.

NOW RATE ALL 16 DESCRIPTIONS
BY PLACING EACH ON ONE OF THE
FIVE SQUARES. WHEN YOU FINISH
PLACING ALL 16, TURN TO THE NEXT
PAGE AND RECORD YOUR RATINGS BY
LISTING THE CARD NUMBERS IN THE
APPROPRIATE COLUMNS.

RATING SHEET (Q.5)

1 Least Likely to Use	2	3	4	5 Most Likely to Use	Of- ¹² fice Use Only
					13,14
					15,16
					17,18
					19,20
					21,22
					23,24
					25,26
					27,28
					29,30
					31,32
					33,34
					35,36
					37,38
					39,40
					41,42
					43,44

REMOVE ALL 16 CARDS FROM SORT BOARD AND PLACE RUBBER BAND AROUND THEM. TURN THE PAGE AND CONTINUE.

6. What mode or modes of transportation do you use to get to a major shopping center or recreational facility in the outskirts or suburbs around the city? CIRCLE AS MANY AS APPLY.

	30
Bus	1
Train	2
Auto	3
Other: SPECIFY	0

IF MORE THAN ONE MODE OF TRANSPORTATION CIRCLED
IN Q.6, ANSWER Q.7, OTHERWISE SKIP TO Q.8

7. What mode of transportation do you use most often to get to a major shopping center or recreational facility in the outskirts or suburbs around the city? CIRCLE ONLY ONE.

	31
Bus	1
Train	2
Auto	3
Other: SPECIFY	0

8. Thinking now of the mode of transportation you use most often to get to a major shopping center or recreational facility in the outskirts or suburbs around the city, approximately how many minutes does it usually take you?

NUMBER OF MINUTES: _____
32-34

IF AUTO IS ONE OF THE MODES OF TRANSPORTATION USED,
BUT NOT THE MOST OFTEN MODE USED, ANSWER Q.9,
OTHERWISE SKIP TO Q.10

9. Approximately how many minutes would it usually take for you to get to a major shopping center or recreational facility in the outskirts or suburbs around the city using an automobile?

NUMBER OF MINUTES: _____
35-37

10. On the average, how many times per month do you go to a major shopping center or recreational facility in the outskirts or suburbs around the city? Count each round trip, that is, to and from shopping, as one time.

NUMBER OF TIMES PER MONTH: _____
38, 39

11. If you were making a 30-minute trip to a major shopping center or recreational facility in the outskirts or suburbs around the city for shopping, recreation, or some other non-work purpose, would you be willing to pay \$.35 for a one way trip on AGT? 40

SKIP TO Q.13

CONTINUE

Yes	1
No	2

12. Would you be willing to pay \$.15 for this trip on AGT? 41

Yes	1
No	2

13. People often consider different factors in their selection of public transportation. Some of these may be more important than others. For each of the factors listed below, circle one number on the scale which represents how important that factor is to you in your selection of public transportation. If you circle a "1" it means that factor is not at all important to you. If you circle a "5" it means that factor is very important to you. A "2", "3" or "4" means you are somewhere in between.

		Not at All Important				Very Important
Guarantee of a seat	42	1	2	3	4	5
A comfortable seat	43	1	2	3	4	5
Size of vehicle	44	1	2	3	4	5
Frequency of service	45	1	2	3	4	5
Attendants or drivers on vehicle	46	1	2	3	4	5
Price	47	1	2	3	4	5
Transit mode	48	1	2	3	4	5
Covered or enclosed bus stops/ station entrances and exits	49	1	2	3	4	5
Travel time	50	1	2	3	4	5
Distance of bus stop/station from your home	51	1	2	3	4	5
Attendants inside stations	52	1	2	3	4	5
Distance of bus stop/station from your destination	53	1	2	3	4	5
Quality of ride, that is, noise level, smoothness and the like	54	1	2	3	4	5
Well lit bus stops/station entrances, platforms, and exits	55	1	2	3	4	5

14. Think now of the reliability of the four types of public transportation, that is, their potential for meeting time schedules, possible breakdowns and the like. For each type of transportation, circle one number on the scale from "1" to "5", with "1" being very unreliable and "5" being very reliable, that comes closest to your view of that type of public transportation's reliability.

		Very Unreliable			Very Reliable	
Rail	56	1	2	3	4	5
Local Bus	57	1	2	3	4	5
Express Bus	58	1	2	3	4	5
AGT	59	1	2	3	4	5

15. If you had to make a choice, would you prefer a rail or automated guideway transit (AGT) system that was:

60	
Above ground,	1
Below ground, or	2
On ground level?	3

16. Why do you feel this way? What factors contribute to your preference?

61
62
63
64

17. If you had to make a choice on the size of vehicle in which to ride public transit, would you prefer one that holds:

65	
4 to 6 passengers,	1
10 passengers,	2
30 passengers, or	3
50 or more passengers?	4

18. Why do you feel this way? Why is this size vehicle better than other sizes?

66
67

68
69

19. Aside from driving the vehicle, what other functions do you feel drivers or other attendants provide on public transit?

70
71

72
73

20. Thinking now of all the times you have taken public transportation, have you ever ridden on a:

CIRCLE EITHER A
YES OR NO CODE
FOR EACH

		Yes	No
Rail System?	74	1	2
Local Bus System?	75	1	2
Express Bus System?	76	1	2
AGT System?	77	1	2

21. Thinking of the four types of public transportation we have been talking about, which mode do you prefer most?

78

CIRCLE ONLY
ONE

Rail	1
Local Bus	2
Express Bus	3
AGT	4

CARD 1

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 2

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 3

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 4

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 5

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 6

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 7

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 8

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 9

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 10

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 11

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 12

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 13

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 14

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 15

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 16

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

100% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 17

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 18

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 19

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 20

TRANSIT MODE

Rail

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 21

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 22

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 23

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 24

TRANSIT MODE

Local bus

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

Four blocks

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 25

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 26

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 27

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 28

TRANSIT MODE

Express Bus

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

Four blocks

CARD 29

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

On demand - every 5 minutes

VEHICLE SIZE

10 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes more

PRICE-DIFFERENCE FROM AUTO

\$1.00 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 30

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

Every 15 minutes

VEHICLE SIZE

4-6 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

15 minutes less

PRICE-DIFFERENCE FROM AUTO

\$.50 more

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 31

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

Every 30 minutes

VEHICLE SIZE

50 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

Same

PRICE-DIFFERENCE FROM AUTO

\$.50 less

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

CARD 32

TRANSIT MODE

AGT

FREQUENCY OF SERVICE

Every 45 minutes

VEHICLE SIZE

30 passengers

TRAVEL TIME-DIFFERENCE
FROM AUTO

30 minutes more

PRICE-DIFFERENCE FROM AUTO

Same

SEAT GUARANTEE

50% guaranteed

DISTANCE TO STATION/BUS STOP
FROM HOME

One block

DISTANCE TO DESTINATION FROM
STATION/BUS STOP OF ARRIVAL

One block

TRANSIT STUDY-- SCRIPT

READ THIS MATERIAL TO ALL RESPONDENTS AFTER THEY HAVE
READ PAGE 2 OF THE QUESTIONNAIRE.

These are the possible choices that will be shown on the cards
you just looked at. HAND OUT TRANSIT FEATURES CARD AND SAY:
We will review them in total to give you an opportunity to
think about them.

1. Transit Mode

The first feature on your card is transit mode, that is,
the form or type of public transportation. In this study
we are looking at four modes or types of public transpor-
tation. These are:

- Rail
- Local Bus
- Express Bus
- Automated Guideway Transit/AGT

Some of these modes may be familiar to you while others
may not. In order to help you understand all of them more
fully we have prepared a slide presentation describing each
of the four modes of transportation, and the activities
which take place during a trip on each one of these types
of public transportation.

BEGIN SHOWING SLIDE PRESENTATION AND READ NARRATIVE ON
PAGES 2-5 AS YOU PROCEED. THE SLIDE NUMBERS ARE INDICATED
WITH A CIRCLE AROUND THEM THROUGHOUT THE NARRATIVE. THIS
INDICATES WHERE THE SLIDE SHOULD BE CHANGED ON THE SCREEN.

● Rail

<u>Slide #</u>	<u>Scene</u>	<u>Narrative</u>
1	<u>Title</u>	① We are first looking at a trip on a <u>rail vehicle</u> .
2	<u>Entering Subway Station</u>	② This trip begins by entering the station.
3-6	<u>Turnstiles/Paying at Station</u>	③ Upon entering the station, ④ you pay the fare by dropping a coin ⑤ in the turnstile or by using a weekly or monthly pass. ⑥ Exact change is usually required.
7	<u>Station Maps</u>	⑦ Detailed maps can be found on the station walls in order to locate your destination.
8	<u>Information Booth</u>	⑧ In some stations, there may even be an information area or booth.
9-11	<u>Station Platform</u>	⑨ Once your fare is paid, you proceed to the station platform, ⑩ generally located a floor above ⑪ or below the station lobby, to wait for the train.
12-14	<u>Arrival of Train</u>	⑫ As the train arrives, its destination is usually displayed either on the front or side of the cars. ⑬ When the train stops, the driver opens its doors. ⑭ Passengers enter and exit.
15	<u>Boarding Train</u>	⑮ There are no steps, as the station platform is at the same height as the floor of the rail vehicle.
16	<u>Maps in Train</u>	⑯ There are detailed maps inside the train in order for you to follow the stops. Generally, the train makes all stops along its route.
17-18	<u>Inside Train</u>	⑰ Inside each rail car there are seats which may or may not be available ⑱ at the time you get on. There are also handles and poles for you to hold on to while the train is moving if you are standing.
19	<u>Leaving Train</u>	⑲ When you reach your desired destination, you leave the train and station the same way you entered.

● Local Bus

<u>Slide #</u>	<u>Scene</u>	<u>Narrative</u>
1	<u>Title</u>	① We are now turning to a trip on a <u>local bus</u> .
2-4	<u>Bus Stops</u>	② The trip begins at a bus stop. ③ The stops themselves are indicated by a sign. Route #'s of buses will be indicated if several buses stop at that location. ④ Information about other stops on the route is usually not displayed. This information appears on a printed form which can be obtained either on the bus or at the bus terminal.
5-8	<u>Arrival of Bus/ Boarding</u>	⑤ When the bus arrives, ⑥ its final destination is usually displayed on the front window. ⑦ You board by climbing three steps, ⑧ and pay the fare by placing it in the coin box next to the driver. Exact change is usually required.
9-11	<u>Interior/Intermediate Stops/ More Boarding</u>	⑨ More stops are made along the route and ⑩ the bus gradually fills up. ⑪ More passengers are picked up, while others are being discharged.
12-13	<u>Bus on Street/ Passengers</u>	⑫ The bus travels on side ⑬ and local streets along with other traffic.
14-16	<u>Interior</u>	⑭ Seats may or may not ⑮ be available depending upon when ⑯ you board the bus.
17-18	<u>Leaving Bus</u>	⑰ As the bus approaches your destination, you signal the driver either by going to the front of the bus, or by pushing a button, or pulling a cord ⑱ to indicate you wish to get off at the next stop.

● Express Bus

<u>Slide #</u>	<u>Scene</u>	<u>Narrative</u>
1	<u>Title</u>	① We are now turning to a trip on an <u>express bus</u> .
2-3	<u>Start of Run</u>	② Express buses usually run from a suburban location to the downtown area of the city or other central location. ③ They typically start from a suburban terminal or parking lot.
4-6	<u>Interior of Bus</u>	④ An interior view shows that ⑤ seats may or ⑥ may not be available depending upon the time of your arrival at the terminal. Information about express bus routes and stops appears on a printed form. A copy is usually available either on the bus or at the terminal.
7-9	<u>Paying Fare/ Boarding</u>	⑦ When you board the express bus, you pay your fare to the driver. ⑧ A weekly or monthly pass may be used in some instances. ⑨ Exact change is usually required.
10-11	<u>Entering Express- way/Right of Way</u>	⑩ As the bus leaves the terminal, it enters the expressway ⑪ or right of way for the downtown area of the city or other central location.
12-15	<u>Bus on Freeway/ Right of Way</u>	⑫ The express bus travels on the expressway ⑬ along with other traffic. In some places, express buses have ⑭ exclusive lanes or guideways ⑮ to avoid traffic congestion on the highway.
16-17	<u>Exit from Express- way</u>	⑯ As the express bus approaches the downtown area of the city or other central location, ⑰ it will exit from the expressway or guideway along with other traffic.
18	<u>Distribution</u>	⑱ The express bus completes its trip by making a few stops to discharge passengers.

● Automated Guideway Transit or AGT

<u>Slide #</u>	<u>Scene</u>	<u>Narrative</u>
1	<u>Title</u>	① We are now looking at <u>automated guideway transit or AGT</u> as it is called.
2	<u>View of Station Entrance</u>	③ A trip on AGT begins by entering the station.
3-4	<u>Station Map-- Selecting Destination/Fare Card Dispenser</u>	③ Upon entering the station, you approach a map displaying the stops along the AGT route. ④ Once your destination is known, you proceed to the Fare Card Dispenser. You indicate your destination on the dispenser, insert the correct fare, and a fare card is returned. Exact change at the card dispenser is usually required.
5-7	<u>Paying Fare</u>	⑤ At the turnstiles, ⑥ you insert the fare card and ⑦ gain entrance to the station platform.
8-9	<u>Boarding Platform</u>	⑧ Once your fare is paid, you proceed to the station waiting platform. ⑨ This is either at the same level as the station lobby or at some other level.
10-12	<u>AGT Vehicle</u>	⑩ When the AGT arrives at the station, its doors <u>automatically</u> open ⑪ to allow passengers to enter or exit. ⑫ There are no drivers on the AGT vehicle.
13	<u>Leaving Station</u>	⑬ When all passengers have entered, the doors <u>automatically</u> close and the AGT leaves the station.
14-16	<u>Interior View</u>	⑭ An interior view of AGT shows its seat arrangement. Seats ⑮ may or may not be available. ⑯ There are poles for holding on while the AGT is moving.
17-18	<u>AGT on Guideway</u>	⑰ AGT travels on its own guideway or roadway without interference from street traffic. ⑱ It proceeds from station to station along its designated route. The AGT vehicle is operated and controlled by a central computer assuring that it travels and makes stops along the guideway.
19-20	<u>Approaching Station to Discharge Passengers</u>	⑲ When the AGT arrives at your destination, you leave the vehicle as the doors <u>automatically</u> open. You place your fare card in the exit turnstile, ⑳ and leave the station the same way you entered.

2. Frequency of Service

This feature describes the frequency with which the transit mode runs, that is, the length of time between one vehicle and another. This ranges from, on demand, that is, every five minutes to once every 45 minutes.

3. Vehicle Size

This feature refers to the number of passengers which the vehicle can accommodate. This varies from 4-6 passenger vehicles to 50 passenger vehicles. You are to imagine that vehicles for all transit modes can be made in all sizes.

4. Travel Time Difference from Auto

This the total time of the trip from your home to your destination. This may vary from 15 minutes less than it would take in an automobile to 30 minutes more than it would take in an automobile, in comparison with the 30 minute trip described to you.

5. Price Difference from Auto

This ranges from \$1.00 less for each one-way trip than it would cost by auto, to \$.50 more for each one-way trip than it would cost by auto. Auto costs include all operating, maintenance and parking fees.

6. Seat Guarantee

This means there is either a 100% chance a seat will be available when you board the vehicle or there may be a 50% chance a seat will be available at that time.

7. Distance to Station/Bus Stop from Home

The distance from your home to the station or bus stop may be one city block or four city blocks.

8. Distance to Destination from Station/Bus Stop of Arrival

The distance from the station or bus stop of arrival to your final destination may be one city block or four city blocks.

COLLECT ALL FEATURES CARDS AND HAVE RESPONDENT RETURN TO PAGE 2 OF THE QUESTIONNAIRE TO BEGIN FIRST RATING TASK.

* U.S.G.P.O. 727-743/1302-1700

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— An Analysis of the U.S.
— market for automated
—



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