

A SURVEY OF ELDERLY AND HANDICAPPED
RIDERS ON THE CHARLOTTESVILLE TRANSIT SYSTEM

by

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(The opinions, findings, and conclusions expressed in this report are those of the author and not necessarily those of the sponsoring agencies.)

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ABSTRACT

This report develops a profile of the elderly and handicapped public transit rider in the city of Charlottesville, Virginia, population 40,800. A compilation of socioeconomic and trip-making characteristics determined from a mail-out survey of elderly and handicapped transit users is presented. These characteristics are also compared with characteristics of the general transit ridership in Charlottesville developed in an earlier on-board bus survey.

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INTRODUCTION

Transit service in the city of Charlottesville, Virginia, population 40,800, is provided by the city owned and operated Charlottesville Transit Service (CTS), which has four 31-passenger Blue Bird buses and eight 16-passenger Mercedes-Benz buses. Four of the small buses and three of the large buses operate on 1-hour headways over seven regularly scheduled fixed routes within the city. The remainder of the fleet is used for backups, charter services, and special services. The fixed route service operates Monday through Saturday from 6:05 a.m. to 8:00 p.m., and is currently transporting an average of 1,800 riders while traveling approximately 100 miles per day. The base fare is 25¢ with a 10¢ transfer fee. In April 1976, the CTS introduced a special program offering 20¢ rides to elderly and handicapped riders with reduced fare cards.

In April 1978, the CTS conducted an on-board survey of its riders to determine reasons for increases in ridership and to compare the characteristics of current riders with the characteristics of riders contacted in a similar survey in 1976. An analysis and evaluation of the survey was performed by the Virginia Highway and Transportation Research Council.⁽¹⁾ In keeping with the national interest in the transportation needs of elderly and handicapped persons, the CTS followed the on-board survey with a more detailed survey to determine ways of improving bus service to its elderly and handicapped riders. The Research Council again tabulated the results of the survey and forwarded them to the CTS. This report contains a compilation and documentation of those results.

PURPOSE AND SCOPE

The purpose of this report was to determine the trip-making and socioeconomic characteristics of elderly and handicapped patrons of the public transit system in the small urban area of Charlottesville, and, where possible, to compare these characteristics with the characteristics of the general transit ridership. The report

is based on the results of two surveys conducted by the Charlottesville Transit Service in the spring of 1978 — an on-board survey of the general ridership and a survey limited to the elderly and handicapped riders. The results of the former are summarized in reference 1, whereas this report summarizes those of the latter.

SURVEY METHODOLOGY

In order to determine the trip-making and socioeconomic characteristics of the elderly and handicapped riders, the questionnaires shown in Figures 1 and 2 were developed. The questionnaires were identical, except that the questionnaire for the handicapped requested information on age, handicap, and availability of driver's license, and that for the elderly requested information on the destinations and times of trips by taxi. The questionnaires for the elderly were distributed by mail to approximately 575 persons 65 years or older who had qualified for reduced fare cards under the transit company's special discount program. Of 338 questionnaires returned, 331 were usable and formed the basis for the tabulations. It is noted that the projected 1980 population of elderly in Charlottesville is 4,387.(2)

The questionnaires for the handicapped were distributed in three ways. Over 100 were mailed to those handicapped persons who had received the reduced fare cards. To qualify for these cards, a person had simply completed an application stating his handicap and obtained a physician's verification listing the expected duration of the handicap. Approximately 240 questionnaires were mailed by the Virginia Department of Rehabilitative Services (DRS) to clients residing in the city. Finally, the Mental Retardation Services was provided 100 questionnaires to distribute to its clients. Of approximately 120 questionnaires returned from the three distributions, 88 were usable and therefore tabulated. A recent study by the city estimated that up to 4,000 handicapped persons of all ages reside in Charlottesville.(3)

In tabulating the responses to the questionnaires mailed to the handicapped, it was found that 14 of the respondents had never used the city's bus service. For purposes of this report, these questionnaires were deleted and the data were retabulated based on 74 questionnaires. Since only 2.8% of the elderly respondents had never ridden the bus, this step was not considered necessary for the analysis of the questionnaires from elderly riders.

1. Are you Male Female
2. What is your home address? _____
3. How often do you ride the City bus?
- Daily Weekly Monthly Rarely Never

IF YOU CHECKED NEVER, PLEASE PROCEED TO QUESTION 9.

4. Did you ride the City buses in 1976? Yes No

If no, please check the reason you began riding the bus:

- | | |
|------------------------------------------------------------|-------------------------------------------------------|
| <input type="checkbox"/> New to the area since 1976 | <input type="checkbox"/> Reliability of bus system |
| <input type="checkbox"/> The City's new buses | <input type="checkbox"/> Convenience |
| <input type="checkbox"/> New bus service | <input type="checkbox"/> Price of gasoline |
| <input type="checkbox"/> Benches and shelters at bus stops | <input type="checkbox"/> Bus fare |
| | <input type="checkbox"/> Other (please specify) _____ |

5. How do you get to the bus from your home?

- Walk Car Other

If you walk to the bus, how many minutes does it take to reach the bus stop?

- 5 minutes or less 5 - 10 minutes more than 10 minutes

6. Please check the locations you travel to most frequently on the bus:

- | | |
|--------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> Home | <input type="checkbox"/> School |
| <input type="checkbox"/> Work | <input type="checkbox"/> Shopping |
| <input type="checkbox"/> Personal business | <input type="checkbox"/> Social/recreation |
| <input type="checkbox"/> Doctor or dentist | <input type="checkbox"/> Other |

7. Please check the main areas in the City that you travel to on the City bus:

- | | |
|----------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Downtown Mall | <input type="checkbox"/> Barracks Road Shopping Center |
| <input type="checkbox"/> University of Virginia | <input type="checkbox"/> K-Mart Shopping Center |
| <input type="checkbox"/> U.Va. Hospital/Clinics | <input type="checkbox"/> Workshop for the Blind |
| <input type="checkbox"/> Martha Jefferson Hospital | <input type="checkbox"/> Workshop V |
| <input type="checkbox"/> Health Department | <input type="checkbox"/> Independence House |
| <input type="checkbox"/> Highrise for Elderly | <input type="checkbox"/> Other (please specify) _____ |
| <input type="checkbox"/> City Hall | _____ |

PLEASE TURN THE PAGE AND COMPLETE THE SECOND. THANK YOU.

3446

8. What time of the day do you ride the bus most frequently? (check two)

- 6:00 - 9:00 a.m.
- 12:00 noon - 2:00 p.m.
- 4:00 - 6:00 p.m.
- 9:00 - 12:00 noon
- 2:00 - 4:00 p.m.
- 6:00 - 8:00 p.m.

9. How many cars do you have in your household?

- No cars
- 1 car
- 2 or more cars

10. How often do you take a taxicab?

- Every day
- At least once a week
- Infrequently

Why do you take a taxicab rather than a bus? _____

When you take a taxicab, where do you travel to most frequently?

- Downtown Mall
- Barracks Road Shopping Center
- K-Mart Shopping Cen
- University of Virginia
- U.Va. Hospital/Clinics
- Health Department
- Workshop V
- Martha Jefferson Hospital
- Workshop for the BI
- Highrise for Elderly
- City Hall
- Other (please speci

When you take a taxicab, at what time of the day do you use a cab?

- 6:00 - 9:00 a.m.
- 12:00 noon - 2:00 p.m.
- 4:00 - 6:00 p.m.
- 9:00 - 12:00 noon
- 2:00 - 4:00 p.m.
- 6:00 - 8:00 p.m.

11. Are you (check which fits best):

- Employed
- Retired
- Housewife
- Unemployed or seeking work

12. What is your monthly family income?

- Less than \$250
- \$500 - \$749
- \$1,000 - \$1,249
- \$250 - \$499
- \$750 - \$999
- \$1,250 or more

13. Do you consider the present bus service to be:

- | | Yes | No |
|----------------|--------------------------|--------------------------|
| a. Dependable | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Safe | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Convenient | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Comfortable | <input type="checkbox"/> | <input type="checkbox"/> |

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY. PLEASE RETURN THE SURVEY TO US IN THE SELF-ADDRESSED ENVELOPE WE HAVE PROVIDED.

1. Are you Male Female

2. What is your home address? _____

3. How often do you ride the City bus?

- Daily Weekly Monthly Rarely Never

IF YOU CHECKED NEVER, PLEASE PROCEED TO QUESTION 9.

4. Did you ride the City buses in 1976? Yes No

If no, please check the reason you began riding the bus:

- | | |
|------------------------------------------------------------|-------------------------------------------------------|
| <input type="checkbox"/> New to the area since 1976 | <input type="checkbox"/> Reliability of bus system |
| <input type="checkbox"/> The City's new buses | <input type="checkbox"/> Convenience |
| <input type="checkbox"/> New bus service | <input type="checkbox"/> Price of gasoline |
| <input type="checkbox"/> Benches and shelters at bus stops | <input type="checkbox"/> Bus Fare |
| | <input type="checkbox"/> Other (please specify) _____ |

5. How do you get to the bus from your home?

- Walk Car Other

If you walk to the bus, how many minutes does it take to reach the bus stop?

- 5 minutes or less 5-10 minutes more than 10 minutes

6. Please check the locations you travel to most frequently on the bus:

- | | |
|--------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> Home | <input type="checkbox"/> School |
| <input type="checkbox"/> Work | <input type="checkbox"/> Shopping |
| <input type="checkbox"/> Personal business | <input type="checkbox"/> Social recreation |
| <input type="checkbox"/> Doctor or dentist | <input type="checkbox"/> Other |

7. Please check the main areas in the City that you travel to on the City bus:

- | | |
|----------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Downtown Mall | <input type="checkbox"/> Barracks Road Shopping Center |
| <input type="checkbox"/> University of Virginia | <input type="checkbox"/> K-Mart Shopping Center |
| <input type="checkbox"/> U.Va. Hospital/Clinics | <input type="checkbox"/> Workshop for the Blind |
| <input type="checkbox"/> Martha Jefferson Hospital | <input type="checkbox"/> Workshop V |
| <input type="checkbox"/> Health Department | <input type="checkbox"/> Independence House |
| <input type="checkbox"/> Highrise for Elderly | <input type="checkbox"/> Other (please specify) _____ |
| <input type="checkbox"/> City Hall | _____ |

8. What time of the day do you ride the bus most frequently? (check two)

- 6:00-9:00 a.m.
- 12:00 noon-2:00 p.m.
- 4:00-6:00 p.m.
- 9:00-12:00 noon
- 2:00-4:00 p.m.
- 6:00-8:00 p.m.

9. Please check the category which most accurately describes your handicap:

- Physically handicapped, but not in wheelchair
- Physically handicapped, use wheelchair
- Visual impairment
- Hearing impairment
- Mental retardation
- Other (please specify) _____

10. How many cars do you have in your household?

- no cars
- 1 car
- 2 or more cars

Do you have a driver's license? Yes No

11. How often do you ride a taxicab?

- Every day
- At least once a week
- Infrequently

Why do you take a taxicab rather than a bus? _____

12. To what age group do you belong?

- 14 or under
- 15 - 19
- 20 - 24
- 25 - 44
- 45 - 64
- 65 or older

13. Are you (check which fits best):

- Employed
- Retired
- Student
- Housewife
- Unemployed or seeking work

14. What is your monthly family income?

- Less than \$250
- \$250-\$499
- \$500-\$749
- \$750-\$999
- \$1000-\$1249
- \$1250 or more

15. Do you consider the present bus service to be:

	Yes	No
a. Dependable	<input type="checkbox"/>	<input type="checkbox"/>
b. Safe	<input type="checkbox"/>	<input type="checkbox"/>
c. Convenient	<input type="checkbox"/>	<input type="checkbox"/>
d. Comfortable	<input type="checkbox"/>	<input type="checkbox"/>

FINDINGS

Detailed results of the survey are presented in Tables A-1 and A-2 of Appendix A. The line item listed as "no response" for each trip-making and socioeconomic characteristic is the percentage of the 74 and 331 handicapped and elderly persons, respectively, who did not respond or whose response was unacceptable. Only the remaining actual responses were used as the basis for the percentage calculation for each element of the characteristic. In addition to the tabulations shown in Appendix A, several cross-tabulations for the characteristics were developed. These cross-tabulations, along with comparisons with characteristics of the general, or typical, ridership which are found in reference 1, are summarized under the succeeding subheadings. It is noted that 13% of the questionnaires from which general ridership statistics were developed were received from persons 65 years of age and older.

Socioeconomic Characteristics

Almost 82% of the elderly responding to the questionnaire were female, whereas the handicapped respondents were fairly evenly divided with only a small majority being male. The general transit ridership was split approximately 70/30 in favor of females.

As expected due to the large majority of female respondents, approximately 4 out of 5 elderly riders were housewives, with the remainder being employed or retired. Although almost half of the handicapped riders were employed; approximately 1 out of 4 were unemployed or seeking work, probably because of their handicap. Another 16% were retired. Fifty-eight percent of the general transit ridership were employed, while the next largest group, 22%, were students.

As is typical with questions concerning personal income, a very significant portion, 29% in this survey, chose not to give the requested information. Of those elderly persons who did respond, approximately 78% had monthly family incomes of less than \$500, and 36% had monthly incomes of less than \$250. The handicapped riders were even poorer; 53% had incomes less than \$250 and 88% had less than \$500. The typical transit rider had significantly more income, with only 44% having monthly incomes less than \$500 and 16% having less than \$250.

A majority of the respondents, 76% of the elderly and 60% of the handicapped, did not have an automobile available in the household. Sixty-six percent of the handicapped did not have a driver's license. Approximately 50% of the general transit ridership had no car available and no driver's license.

Almost 18% of the handicapped riders failed to respond to the question concerning the nature of their handicaps, which is a typical problem encountered when surveying the handicapped. Of those responding, over 26% were mentally retarded, almost 20% had a physical handicap, and almost 20% had a visual impairment. No wheelchair users rode the CTS as the system is currently inaccessible to them. No other major categories of handicap were found in reviewing the questionnaires.

As for age, over 46% of the handicapped riders were between 25 and 44, with 13% and 28% being in the 20-24 and 45-64 age groups, respectively. The age category of 25-44 was also the most common for the general transit ridership; however, only 32% were in this category. Approximately 21% were in each of the age categories on both sides of this category.

Trip-Making Characteristics

Approximately 71% of both the elderly and handicapped respondents rode the bus at least weekly, with 21% of the elderly and 25% of the handicapped riding daily. Over 85% of the general ridership rode the bus at least weekly, with over 51% riding daily.

The majority of the respondents, 89% of the elderly and 73% of the handicapped, had ridden the bus in 1976. Being new in the area was the main reason cited for beginning to ride the bus; however, the new buses and convenience were also important reasons. Thirty-two percent of the general transit ridership were new riders; they cited being new to the area, reliability of the bus system, and the bus fare as the most common reasons for beginning to ride the bus.

As expected in a small urban area, the primary mode of access to the bus by all riders was walking. Of the respondents, 98% of the elderly, 89% of the handicapped, and 91% of the general ridership walked to the bus stop. Although the majority of the riders in each category, 66%, 70%, and 76%, respectively, took less than 5 minutes to reach the bus stop, a greater percentage of the elderly and handicapped walked 5 minutes or longer.

For both the elderly and handicapped, shopping was the purpose most often cited for making bus trips; the figures were 69% for the elderly and 46% for the handicapped. Excluding "home", which is generally not considered a trip purpose, the next two most cited trip purposes for both groups were personal business and medical, with the percentages for the handicapped being significantly lower for both purposes, 31% versus 57% for personal business and 34% versus 53% for medical. Work trips were cited by 23% of the handicapped but only 12% of the elderly. One percent of the elderly and 11% of the handicapped cited school as a trip purpose, and 9% and 12%, respectively, indicated a social/recreational purpose. The

distribution of trip purposes by the general transit ridership was 53% work, 19% shopping, 10% personal business, 8% school, 3% medical, and 2% social/recreation.

Table 1 compares trip purpose with the frequency of bus trips; e.g., 5.7% of the elderly respondents who cited work as a purpose for frequent trips rode the bus daily. As indicated, the majority of the trips by both the elderly and handicapped occurred on a weekly basis and were for shopping, medical, or personal business purposes. A relatively high percentage of shopping trips of the handicapped occurred daily.

Comparing directly with the most frequently cited purposes for trips, the most frequent destinations for both the elderly and handicapped included the Downtown Mall, Barracks Road Shopping Center, K-Mart, and the University Hospital and Clinics. A significant number of elderly also had destinations at city hall, while a significant number of handicapped had destinations at the University. Other destinations listed were scattered throughout the city.

The most frequent time of travel for elderly respondents occurred between 9 a.m. and 12 noon, with 64% indicating that period as the one of two most frequent times. Most of the other travel by the elderly occurred between noon and 4 p.m., with approximately 39% of the respondents citing each of the 2-hour time periods as the most frequent travel time. The travel times for the handicapped were much more evenly distributed during the day, the peak period being 4 to 6 p.m. for 38% of the responses. Thirty-two percent cited 9 a.m. to 12 noon and approximately 24% cited each of the 2-hour periods between 12 noon and 4 p.m. The handicapped also indicated more travel in the early morning and evening time periods.

Table 2 compares the time of travel with the frequency of bus rides; e.g., 4.1% of the elderly respondents who cited 6-9 a.m. as a frequent travel time rode the bus daily. Most of the bus trips by the elderly were made between 9 a.m. and 4 p.m. on a weekly basis; however, there was a significant number of daily bus trips in the same time period. The most frequent occurrence of travel by the handicapped was 9 a.m. to 12 noon on a weekly basis, with significant weekly bus trips also being taken between 12 noon and 6 p.m. There were also a significant number of daily bus trips, most likely for work purposes, between 6 and 9 a.m. and 4 to 6 p.m.

TABLE 1

BUS RIDE FREQUENCY VS. TRIP PURPOSE
(in percent)

Trip Purpose	Bus Ride Frequency							
	Daily		Weekly		Monthly		Rarely	
	E	H	E	H	E	H	E	H
Work	5.7	12.6	4.8	4.2	0.3	0	1.3	5.6
Personal Business	12.4	11.3	33.1	15.5	4.8	0	6.4	5.6
Doctor or Dentist	10.8	8.5	33.1	21.1	5.1	0	3.8	4.2
School	0.6	1.4	0.3	4.2	0	0	0	5.6
Shopping	14.3	14.1	42.0	25.3	5.1	0	7.0	7.0
Social or Recreation	3.2	1.4	4.8	11.3	0	0	1.0	0

NOTE: Handicapped data based on 71 valid samples.
Elderly data based on 314 valid samples.

TABLE 2

BUS RIDE FREQUENCY VS. TIME OF TRAVEL
(in percent)

Time of Travel	Bus Ride Frequency							
	Daily		Weekly		Monthly		Rarely	
	E	H	E	H	E	H	E	H
6-9 a.m.	4.1	11.3	8.0	2.8	0.6	0	3.2	8.5
9-12 noon	13.1	7.0	36.0	19.7	6.1	0	9.2	7.0
12 noon-2 p.m.	9.2	1.4	23.2	15.5	2.9	0	4.8	5.6
2-4 p.m.	8.3	8.5	21.3	11.3	3.5	0	4.8	4.2
4-6 p.m.	4.8	11.3	3.5	14.1	0.3	0	1.6	12.7
6-8 p.m.	1.6	1.4	1.0	5.6	0.3	0	0.6	0

NOTE: Handicapped data based on 71 valid samples.
Elderly data based on 314 valid samples

The majority of the transit system's elderly and handicapped riders who responded to the survey, 81% and 72%, respectively, rode the taxi on an infrequent basis. Significant numbers, however, 18% of the elderly and 25% of the handicapped, did use a taxi at least once a week. These statistics compare very closely with the taxi-riding characteristics of the general transit ridership, of which 82% rode infrequently and 21% rode weekly. Destinations for the taxi trips by the elderly were generally the same as for the bus trips; however, the percentages of respondents who cited the destinations were much less since over one-third cited destinations not listed on the questionnaire. Other frequently listed destinations included doctors' offices, churches, and the bus station. The most frequent taxi travel time was between 9 a.m. and noon, also the same as the most frequent bus travel time for the elderly.

A large majority of the elderly and handicapped riders considered the bus service to be dependable, safe, convenient, and comfortable, with over 80% of the respondents replying in the affirmative when asked their opinion of each service characteristic. Convenience and comfort had the most negative opinions, especially by the handicapped. Of the general transit ridership, 94% or over responded affirmatively when asked their opinion of each of the service characteristics.

CONCLUSIONS

The results of the survey provide a valid profile of the elderly and handicapped transit riders in Charlottesville. Since questionnaires were sent to all elderly and handicapped persons having fare discount cards, it can be assumed that a significant number of the target population were contacted. Usable responses were received from approximately 58% of the elderly card holders. The 74 usable responses received from handicapped persons represented a much smaller percentage of the questionnaires distributed; however, the questionnaires distributed by the DRS and Mental Retardation Services were not limited to transit riders. Information necessary to determine the rate of response of the handicapped riders was not available.

There were several potential sources of minor error in the survey. Since elderly persons frequently have disabilities, it is probable that some of the elderly respondents were also handicapped. Likewise, it is known from the data that several of the handicapped respondents were 64 years of age or older. Further, because of the three separate distributions, it was possible that a handicapped person received and submitted more than one questionnaire. Finally, as pointed out previously, a small percentage of the questionnaires from elderly respondents were from persons who did not use the transit service.

The typical elderly transit rider is a housewife who resides in a household having no car and having a monthly income of less than \$500. She rode the bus in 1976, currently rides at least weekly, and spends less than 5 minutes walking to the bus stop. She is most likely going shopping, to take care of personal business, or to medical appointments in the morning. Her destination is most likely to be the Downtown Mall, Barracks Road Shopping Center, K-Mart, city hall, or University Hospital and related clinics. Finally, she takes the taxi infrequently.

The typical handicapped transit rider is more difficult to describe than the elderly rider; that is, particular characteristics did not predominate as they did for the elderly. If the most frequent characteristic is used, however, a general profile of the handicapped rider can be stated. The handicapped rider, who may be male or female, is between the ages of 25 and 44, resides in a household having no car and earning less than \$500 per month, has no driver's license, and is employed. He is most likely to be mentally retarded, to have a visual impairment, or to be otherwise physically handicapped (not in a wheelchair). He rode the bus in 1976, currently rides at least weekly, and spends less than 5 minutes walking to the bus stop. His trips are usually for shopping, personal business, medical appointments, and work. He usually goes to the Downtown Mall, Barracks Road Shopping Center, K-Mart, the University, and the University Hospital and related clinics. The handicapped who ride daily travel in the morning and afternoon peak periods, whereas handicapped persons who ride less frequently generally travel in the morning. Finally, most of the handicapped take the taxi infrequently.

As expected, the characteristics of the general transit ridership differ substantially from those of the elderly and handicapped riders. Most of the riders are female, though not as predominantly so as with the elderly. The percentages who are employed and who are students are higher than for the elderly and handicapped. Although half of the general ridership have no car or license, this is less than the corresponding percentages for the elderly and handicapped. A slight majority are in households earning over \$500 per month, whereas a significant majority of the elderly and handicapped are in households where less than \$500 per month is earned. Over 50% of the general ridership use the bus daily, which is substantially higher than the rate for the elderly and handicapped. Finally, the majority of the general ridership's trips are for work, whereas shopping, personal business, and medical appointments predominate the trips by the elderly and handicapped. The characteristics for all three groups are summarized in Table 3.

TABLE 3

SUMMARY STATISTICS FOR ELDERLY, HANDICAPPED, AND GENERAL TRANSIT RIDERS

<u>Characteristic</u>	<u>Elderly</u>	<u>Handicapped</u>	<u>General</u>
Sex	82% Female	52% Male	70% Female
Age	65 or older - 100%	25 to 44 - 46%	25 to 44 - 32%
Household Income	Less than \$500/mo.- 78%	Less than \$500/mo.- 88%	Less than \$500/mo.- 44%
Household Car Ownership	None - 76%	None - 60%	None - 51%
Driver's License	N/A	No - 66%	No - 51%
Status	Housewife - 79% Employed - 12%	Employed - 46% Unemployed - 25%	Employed - 58% Student - 22%
Handicap	N/A	Mental - 26% Visual - 20% Physical - 20%	N/A
Bus Ride Frequency	Daily - 21% Weekly - 51%	Daily - 25% Weekly - 45%	Daily - 51% Weekly - 34%
Ride in 1976	Yes - 89%	Yes - 73%	Yes - 68%
Mode of Access	Walk - 98% Less than 5 min. - 66%	Walk - 89% Less than 5 min. - 70%	Walk - 91% Less than 5 min. - 76%
Frequent Trip Purposes	Shopping, personal business, medical	Shopping, personal business, medical, work	Work, shopping, personal business
Frequent Trip Destinations	Mall, Barracks Rd. S.C., City Hall, K-Mart, U.Va. Hos- pital/clinics	Barracks Rd. S.C., Mall, U.Va. Hos- pital/clinics, K-Mart, U.Va.	N/A
Frequent Travel Times	9 to noon - 64% Noon to 2 - 40% 2 to 4 - 38%	9 to noon - 32% 4 to 6 - 38%	N/A
Taxi Ride Frequency	Infrequently - 81%	Infrequently - 72%	Infrequently - 82%

The results of the survey do not provide much information on ways the CTS can improve its service to the elderly and handicapped. Over 90% of the elderly riders felt that the existing service was dependable, safe, convenient, and comfortable. The affirmative responses were somewhat less for the handicapped, with possible improvement needed in convenience and comfort of the service. The only specific information providing insight into the problems encountered by the target groups are the responses to the questions concerning taxis. Although most respondents indicated they took the taxi infrequently, written comments as to why the taxi was taken rather than the bus can provide ideas for improvement. Several of the more frequently stated reasons include 1) no night or Sunday service, 2) bad weather, 3) not convenient with packages, luggage, or groceries, 4) destinations not convenient to bus line, 5) bus stop not convenient to home, 6) long headways, 7) slow service, and 8) emergencies. Finally, the elderly did not list any predominant destinations for taxi trips that were off the existing bus routes.

REFERENCES

1. Duncan, Katherine E., An Analysis of the 1978 Charlottesville on-Board Bus Survey, Virginia Highway and Transportation Research Council, VHTRC 79-R56, Charlottesville, Virginia, 1979.
2. Characteristics of Older Virginians: Selected Statistics, Technical Report, Virginia Office on Aging, June 1976.
3. Needs of the Handicapped, Department of Community Development, City of Charlottesville, June 1977.

APPENDIX A

TABULATION OF THE RESULTS OF THE ELDERLY
AND HANDICAPPED TRANSIT RIDER QUESTIONNAIRE

TABLE A-1

SOCIOECONOMIC CHARACTERISTICS OF ELDERLY AND HANDICAPPED TRANSIT USERS

<u>Characteristic</u>	<u>% of Those Responding</u>	
	<u>Elderly</u>	<u>Handicapped</u>
1. Sex -		
Male	18.1	52.1
Female	81.9	47.9
No Response	0	1.4
2. Handicap -		
Physical, not in wheelchair	N/A	19.7
Physical, use wheelchair	N/A	0
Visual impairment	N/A	19.7
Hearing impairment	N/A	1.6
Mental retardation	N/A	26.2
Other	N/A	23.0
Combination of above	N/A	9.8
No response	N/A	17.6
3. Cars in Household -		
No cars	75.9	60.0
1 car	21.0	22.9
2 or more cars	3.1	17.1
No response	3.6	5.4
4. Driver's License -		
Yes	N/A	17.6
No	N/A	66.2
No response	N/A	16.2
5. Age -		
14 or under	0	0
15-19	0	8.7
20-24	0	13.0
25-44	0	46.4
45-64	0	27.5
65 or older	100.0	4.3
No response	0	6.8
6. Employment Status -		
Employed	11.6	46.3
Housewife	79.1	3.0
Retired	9.1	16.4
Unemployed or seeking work	0.3	25.4
Student	0	9.0
No response	3.3	9.5
7. Monthly Family Income -		
Less than \$250	36.1	53.1
\$250-\$499	41.6	34.7
\$500-\$749	11.3	8.2
\$750-\$999	4.2	2.0
\$1000-\$1249	2.1	0
\$1250, or more	4.6	2.0
No response	28.1	33.8

TABLE A-2

TRIP-MAKING CHARACTERISTICS OF ELDERLY AND HANDICAPPED TRANSIT USERS

<u>Characteristic</u>	<u>% of Those Responding</u>	
	<u>Elderly</u>	<u>Handicapped</u>
1. Bus Travel Frequency -		
Daily	20.7	25.4
Weekly	51.2	45.1
Monthly	8.0	0
Rarely	17.3	29.6
Never	2.8	0
No response	2.1	4.1
2. Ride in 1976 -		
Yes	88.8	72.9
No	11.2	27.1
No response	5.4	5.4
If "No", why ride now -		
New to area	37.1	36.8
New buses	11.4	0
New service	0	5.3
Benches & shelters	5.7	5.3
Reliability	2.9	5.3
Convenience	14.3	5.3
Price of gasoline	2.9	0
Bus fare	2.9	0
Other	22.9	47.4
No response	0	0
3. Mode to Bus -		
Walk	97.8	88.7
Car	1.9	5.6
Other	0.3	5.6
No response	3.6	4.1
If walk, how long -		
5 minutes or less	65.6	69.8
5-10 minutes	26.2	22.2
More than 10 minutes	7.9	7.9
No response	0	0
4. Most frequent Trip Purpose -		
Home	34.6	37.8
Work	12.1	23.0
Personal business	56.7	31.1
Doctor or dentist	52.6	33.8
School	0.9	10.8
Shopping	68.8	45.9
Social recreation	9.0	12.2
Other	13.7	13.5
No response	3.0	0

TABLE A-2, continued . . .

<u>Characteristic</u>		<u>Elderly</u>	<u>Handicapped</u>
5. Most Frequent Destination -	Downtown Mall	79.4	51.4
	U.Va.	22.7	31.1
	U.Va. Hospital/clinics	30.8	44.6
	Martha Jefferson Hospital	22.4	2.7
	Health Department	5.9	10.8
	Highrise for elderly	5.9	8.1
	City Hall	40.2	23.0
	Barracks Rd. Shop. Ctr.	53.9	55.4
	K-Mart Shop. Ctr.	31.5	33.8
	Workshop for blind	0.6	6.8
	Workshop V	0.6	4.1
	Independence House	0.6	2.7
	Other	18.4	9.5
	No response	3.0	0
	6. Most Frequent Travel Time -	6-9 a.m.	16.2
9-12 noon		64.2	32.4
12 noon-2 p.m.		39.6	23.0
2-4 p.m.		38.3	24.3
4-6 p.m.		10.3	37.8
6-8 p.m.		3.4	6.8
No response		3.0	0
7. Taxi Travel Frequency -		Every day	1.0
	At least once a week	18.4	25.0
	Infrequently	80.6	72.1
	No response	13.0	8.1
8. Most Frequent Destination - (Taxi)	Downtown Mall	16.6	N/A
	U.Va.	6.3	N/A
	Martha Jefferson Hospital	8.2	N/A
	Highrise for elderly	1.5	N/A
	Barracks Rd. Shop. Ctr.	10.0	N/A
	U.Va. Hospital/clinics	16.3	N/A
	Workshop V	0.3	N/A
	City Hall	5.4	N/A
	K-Mart Shop. Ctr.	4.5	N/A
	Health Department	2.4	N/A
	Workshop for Blind	0	N/A
	Other	35.6	N/A
No response	0	N/A	
9. Most Frequent Travel Time - (Taxi)	6-9 a.m.	7.6	N/A
	9-12 noon	24.2	N/A
	12 noon-2 p.m.	13.0	N/A
	2-4 p.m.	8.0	N/A
	4-6 p.m.	5.4	N/A
	6-8 p.m.	8.5	N/A
	No response	0	N/A

