Mass Transit For Elderly And Handicapped Persons: Urban Mass Transportation Administration's Actions

Until late 1974, the Urban Mass Transportation Administration was generally unresponsive to the transit needs of elderly and handicapped persons. During 1975 and 1976 improvements have been made.

Many representatives of elderly and handicapped persons believe that the Urban Mass Transportation Act requires all urban transit services to be fully accessible to everyone. The Transportation Administration believes that providing equivalent specialized services fulfills the law. These opposing views have led to court cases to resolve the issue.

GAO is not taking a position on the legal controversy but believes that certain factors should be considered in developing future legislation and that service for the elderly and the handicapped can be improved.
The Honorable John E. Moss  
House of Representatives

Dear Mr. Moss:

Pursuant to your request of January 29, 1976, and subsequent agreements we have reviewed the Urban Mass Transportation Administration's actions to provide mass transit that elderly and handicapped persons can use. As you know, Congressman Christopher J. Dodd shares your concern in this matter and has endorsed your request.

It is our usual policy to obtain comments on the contents of our proposed reports from those concerned with the matters contained in them; however, at your request, we did not release the proposed report to the Department of Transportation or to any other concerned organizations for their advance review and comment.

This report contains recommendations to the Secretary of Transportation. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report. We will be in touch with your office in the near future to arrange for release of the report so that requirements of section 236 can be set in motion.

Sincerely yours,

Comptroller General of the United States
Elderly and handicapped persons have by law the same right as other persons to use mass transit, and special efforts must be made to plan and design mass transit so that everyone can use it effectively. How this is to be done is being disputed. (See pp. 1 and 65 to 67.)

Before 1975 the Urban Mass Transportation Administration was passive in carrying out this law. As a result, mass transit grants awarded to local transit officials seldom addressed the needs of elderly and handicapped persons. Some recent regulations should prove helpful, but more can be done. (See p. 5.)

The previous Congress proposed legislation to expand the requirements for transportation to meet the needs of elderly and handicapped persons, but this legislation was not enacted. (See pp. 70 and 71.)

The following should be recognized in developing future legislation:

--A mandate to spend Federal funds for only a specific bus accessible to everyone could stall the manufacture of standard urban mass transit buses in the United States until that bus could be developed. If such a mandate is legislated, its implementation date should coincide with the time when the special bus could be sold commercially.

--Based on a range of prices quoted in September 1976 by the three manufacturers of standard buses, a mandate that present technology buses be accessible by wheelchair would increase the cost of each new bus by about $5,800 to $9,000.
Within the service areas of urban mass transit systems nationwide, approximately 700,000 elderly and handicapped persons would be able, for the first time, to use such systems if buses were accessible by wheelchairs. However, no one knows how many and to what extent these persons would use the accessible services or their impact on ridership in general. (See pp. 75 and 76.)

CONTROVERSY ABOUT HOW TO PROVIDE TRANSIT FOR THE ELDERLY AND HANDICAPPED

In November 1970 the Urban Mass Transportation Administration instructed grant applicants to make reasonable efforts to plan and design their transit systems so that elderly and handicapped persons could use them effectively. However, until late 1974, the agency made only minimal efforts to see that these instructions were implemented. (See p. 5.)

The Transportation Administration did not define "reasonable efforts." Its evaluation of each grantee's efforts was left to the discretion of its capital grant representatives. As a result, local transit officials did not know what was required of them and several were sued to make their transit systems fully accessible. The Transportation Administration was a defendant in many of these cases. (See pp. 29 and 67.)

The Transportation Administration and many transit authorities believe that (1) the act does not require all mass transit facilities and equipment to be fully accessible and (2) equivalent specialized transit services are an appropriate alternative. Many representatives of elderly and handicapped persons believe the act requires all urban mass transit services to be fully accessible for all persons. These opposing views have been the basis of the legal controversy. (See pp. 65 to 67.) The agency believed that if any of these cases were decided in favor of the plaintiffs, production of regular buses would be halted until an acceptable accessible bus could become commercially available. (See pp. 67, 68 and 70.)
GAO has not taken a position on the opposing interpretations of the law, but believes that several factors need to be considered, including

-- the cost of making transit systems fully accessible,

-- the extent that elderly and handicapped persons would use such systems, and

-- how other transit riders would be affected.

Not enough information about these factors is available to decide whether to provide fully accessible transportation nationwide. One means of obtaining this information would be to develop fully accessible transportation in selected urban areas, particularly those areas desiring such service.

Although the agency has planned a program with similar objectives to begin in fiscal year 1977, the plans for it are still indefinite and appear limited in scope. (See pp. 71 to 74.)

Representatives of elderly and handicapped persons generally believe that recent regulations, requiring "special efforts" to make mass transit available to all, are positive. Many were concerned, however, because the regulations (1) do not mandate fully accessible buses, (2) do not contain provisions on how regulations will be enforced, and (3) allow local officials to decide how transportation for elderly and handicapped persons will be provided without specifically stating what will be acceptable. (See pp. 33 and 34.)

**PLANNING AND IMPLEMENTING TRANSIT SERVICES FOR THE ELDERLY AND HANDICAPPED**

During 1975 and 1976 the Urban Mass Transportation Administration placed more emphasis on legislated requirements. More mass transit projects that would benefit elderly and handicapped persons were being planned and
implemented by local transit authorities as a result. In some urban areas, agencies other than the local transit authorities provide such services. Some of these agencies were having financial difficulties which hindered or limited that service. (See pp. 26 and 27.)

RESEARCHING, DEVELOPING, AND DEMONSTRATING NEW TECHNOLOGY

The Urban Mass Transportation Administration has undertaken research and development to improve the design of transit vehicles and facilities to make them more accessible. The agency has demonstrated public transit services that can improve the mobility of elderly and handicapped persons, and has conducted special research studies to learn more about their transportation needs and problems and to develop possible solutions. The agency has not made the fullest use of the results of these projects in solving the transit problems of elderly and handicapped persons. (See pp. 36 to 38.)

RECOMMENDATIONS

The Administrator of the Urban Mass Transportation Administration should:

-- Strengthen and monitor the agency's regulations on transportation for elderly and handicapped persons. (See p. 35.)

-- Make sure that the agency's planned program to develop and study the results of fully accessible urban transit is broad enough and done quickly enough to give meaningful results. (See p. 75.)

-- Require transit authorities receiving Federal funds to make sure that other agencies have sufficient funds to provide service when it has been decided that such agencies are to provide that service. (See p. 27.)
--Develop means to make sure that where appropriate, research, development, and demonstration projects fully address the transit needs of elderly and handicapped persons and that the results of these projects are used to the fullest extent in solving the transit problems of these persons. (See pp. 48 and 63.)

GAO made this review at the request of Congressman John E. Moss who requested that GAO not obtain comments from the Department of Transportation or other organizations involved in matters contained in the report.
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SCOPE OF REVIEW

Letter dated January 29, 1976, from Representative John E. Moss to the Comptroller General

ABBREVIATIONS

AC Transit Alameda Contra Costa Transit
BART Bay Area Rapid Transit District
GAO General Accounting Office
MBTA Massachusetts Bay Transportation Authority
Muni San Francisco Municipal Railway
UMTA Urban Mass Transportation Administration
Chapter 1

Introduction

The Urban Mass Transportation Act of 1964, (49 U.S.C. 1601 et seq.) was amended in 1970, declaring that elderly and handicapped persons have the same right as other persons to use mass transportation facilities and services. The act, which is administered by the Urban Mass Transportation Administration (UMTA), Department of Transportation, requires that special efforts be made in planning and designing mass transportation facilities and services so that elderly and handicapped persons will have effective mass transportation available to them.

Congressman John E. Moss requested us to review UMTA's actions relative to providing urban mass transportation to meet the transportation needs of handicapped persons. Congressman Christopher J. Dodd also expressed an interest in such a review and endorsed the request. Because the act and UMTA's actions to implement the act address the transportation needs of elderly and handicapped persons together, we reviewed UMTA's actions relative to both elderly and handicapped persons.

Several programs were established to carry out the overall purposes of the act. UMTA makes the following types of grants under these programs which are relevant to matters discussed in this report.

--Capital facilities grants under sections 3, 5, and 16 of the act provide financial assistance to urban areas to develop, improve, and expand their mass transit systems.

--Technical studies grants under section 9 of the act provide financial assistance to urban areas for transportation planning and associated technical studies necessary to meet UMTA's requirements to be eligible to receive capital grants.

--Operating assistance grants under section 5 of the act provide financial assistance to urban areas to defray their transit operating expenses.

--Research, development, and demonstration grants under section 6 of the act are used to develop new technology and techniques to improve urban mass transportation.
WHO ARE THE ELDERLY AND HANDICAPPED?

The act does not define an elderly person; UMTA allows each locality to define who is elderly. The act defines a handicapped person as an individual who, by reason of illness, injury, age, congenital malfunction, or other permanent or temporary incapacity or disability, is unable without special facilities, planning, or design to use mass transportation as effectively as other persons.

Transit-related handicaps range from those which might cause some inconvenience in using public transit to those which make existing public transit inaccessible. Persons with handicaps which make it difficult or impossible to use most present modes of mass transit include the blind, the deaf (who need visual route and schedule displays), those who use wheelchairs, and those who use special aides or otherwise have difficulty getting around alone.

Persons with severe mobility problems who cannot use mass transportation and have no other means of transportation are not able to take advantage of economic and social opportunities of their community, such as being able to find or hold jobs, obtain regular medical care, improve their education, shop in competitively priced markets, or take part in everyday social activities.

In July 1973 the Transportation Systems Center 1/ prepared a study for UMTA on the transit needs of elderly and handicapped persons. The study stated that, based on the 1970 census, there were approximately 26.5 million elderly (65 years of age or older) and handicapped persons in the Nation, as summarized in the following table.

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<tr>
<th></th>
<th>Elderly</th>
<th>Not elderly</th>
<th>Total</th>
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<tr>
<td>Handicapped</td>
<td>6,990,000</td>
<td>6,400,000</td>
<td>13,390,000</td>
</tr>
<tr>
<td>Not handicapped</td>
<td>13,110,000</td>
<td>-</td>
<td>13,110,000</td>
</tr>
<tr>
<td>Total</td>
<td>20,100,000</td>
<td>6,400,000</td>
<td>26,500,000</td>
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1/ The Transportation Systems Center, a component of the Department of Transportation, provides research and development support to the Department's operating agencies, including UMTA.
The chart on page 4, derived from this study, shows the extent to which the Nation's 14.8 million elderly and handicapped persons who live in urban areas of 50,000 or more population can use urban mass transportation. For purposes of the study, urban mass transit was considered available to elderly and handicapped persons if they lived within two blocks of a mass transit stop. The chart shows that present urban mass transportation is unusable or unavailable for 4.2 million of the 10.4 million elderly and handicapped persons who live in urban areas and are able to leave their residences but cannot drive an automobile as follows:

Those who can leave their residences but cannot use available public transportation 700,000

Those who can leave their residences but have no available public transportation (535,000 of these would not be able to use present modes of public transit if it were available) 3,535,000

Total 4,235,000

According to the study the foregoing data includes only elderly and handicapped persons who live in urbanized areas of 50,000 or more population because

--UMTA's authorizations primarily are for programs in urbanized areas, and

--the transit problems of persons in rural areas require entirely different solutions from those in urbanized areas.

Although this data was based on the 1970 census, it is the most recent data available.
TOTAL ELDERLY AND HANDICAPPED POPULATION
26.5 MILLION

LIVE IN AREAS OF LESS THAN 50,000 POPULATION
11.7 MILLION

CAN DRIVE AN AUTOMOBILE
4.4 MILLION

LIVE IN URBAN AREAS OF 50,000 OR MORE POPULATION
10.8 MILLION

CANNOT DRIVE AN AUTOMOBILE
10.4 MILLION

PUBLIC TRANSIT AVAILABLE WITHIN TWO BLOCKS
6.2 MILLION

PHYSICALLY ABLE TO USE PUBLIC TRANSIT
4.6 MILLION

CAN LEAVE RESIDENCE BUT NOT PHYSICALLY ABLE TO USE PUBLIC TRANSIT
700,000

CANNOT LEAVE RESIDENCE
900,000

COULD USE PUBLIC TRANSIT IF AVAILABLE
3.0 MILLION

PUBLIC TRANSIT NOT AVAILABLE WITHIN TWO BLOCKS
4.2 MILLION

CAN LEAVE RESIDENCE BUT NOT PHYSICALLY ABLE TO USE PRESENT PUBLIC TRANSIT IF AVAILABLE
535,000

CANNOT LEAVE RESIDENCE
665,000
CHAPTER 2

UMTA'S ACTIONS TO PLAN

AND PROVIDE MASS TRANSPORTATION

WHICH CAN BE USED EFFECTIVELY

BY ELDERLY AND HANDICAPPED PERSONS

The Urban Mass Transportation Act of 1964 was amended on October 15, 1970. Section 16(a) of the amended act states:

"It is hereby declared to be the national policy that elderly and handicapped persons have the same right as other persons to utilize mass transportation facilities and services; that special efforts shall be made in the planning and design of mass transportation facilities and services so that the availability to elderly and handicapped persons of mass transportation which they can effectively utilize will be assured; and that all Federal programs offering assistance in the field of mass transportation (including the programs under this Act) should contain provisions implementing this policy."

In November 1970, 1 month after the act was amended, UMTA issued instructions requiring applicants for capital grants to make reasonable efforts in planning and designing their transportation facilities and equipment to provide mass transportation that elderly and handicapped persons could effectively use. However, until late in 1974, UMTA made only minimal efforts to insure that these instructions were carried out. At that time, only 10 percent of the transit plans nationwide contained provisions to meet the transportation needs of elderly and handicapped persons.

Late in 1974 UMTA began to emphasize planning to meet the transportation needs of elderly and handicapped persons when it agreed, in settling a lawsuit, to issue regulations implementing section 16(a) of the act. Although UMTA's emphasis appears to be a reaction to external pressures rather than a recognition of its legal mandate, we believe that this emphasis is resulting in planning and providing some mass transportation that can be more effectively used by elderly and handicapped persons.
We also found that UMTA:

--Approved some grants for capital improvement projects for transit systems which did not provide mass transportation in their regular transit services that elderly and handicapped persons could effectively use, and did not require that alternative service be provided that they could use.

--Has been reluctant to approve grants for capital improvement projects which would provide full accessibility for urban transit systems which were otherwise inaccessible by persons in wheelchairs or whose limited mobility prevented them from climbing steps.

--Has awarded capital grants to private nonprofit organizations, which have favored the more affluent organizations because less affluent organizations cannot afford to buy and operate the transit vehicles purchased partly with grant funds. This has resulted in certain areas not providing for the transit needs of elderly and handicapped persons.

PLANNING URBAN MASS TRANSPORTATION TO MEET THE NEEDS OF ELDERLY AND HANDICAPPED PERSONS

An urban area must meet the planning and programming requirements of the act to qualify for UMTA capital and operating subsidy grants. UMTA provided only limited guidance to assure planning and programming of mass transit services for elderly and handicapped persons until 1975 when it issued its proposed regulations on transportation for elderly and handicapped persons.

Under section 9 of the act, UMTA makes technical studies grants to provide funds to States and local public agencies for the cost of eligible planning, engineering, designing, and evaluating projects as part of a unified or coordinated urban transportation system. Many of these grants were used to prepare transportation plans. UMTA estimated that $3.6 million in technical studies grants were approved in fiscal year 1976 specifically to address the transportation needs of the elderly and handicapped. UMTA has not developed this information for any other period.

UMTA's instructions to grant applicants required that technical studies for planning consider the safety and
mobility problems of elderly and handicapped persons, the
cost of any special equipment or facilities, the expected
ridership increase, special routing, fare structures, and
other factors to attract elderly and handicapped persons as
riders.

Limited UMTA emphasis

We found that transportation officials in some urban
areas did not seriously consider these planning requirements
until UMTA began to develop regulations to implement section
16(a) in 1974. Transportation plans which did exist to meet
the transit needs of elderly and handicapped persons in these
areas were the result of State laws or local community pres-
sures, rather than a result of UMTA's requirements.

For example, the Massachusetts Bay Transportation
Authority (MBTA) in Boston, Massachusetts, has provided its
services free to blind persons since 1923 and for half-fare
to elderly persons since 1969. Both programs were estab-
lished by State laws. However, MBTA's 1973 transit plan's
only mention of elderly and handicapped persons was that
elderly persons are permitted to ride for half-fare. This
plan was funded through an UMTA technical study grant.

In the San Francisco Bay area of California, the 1973
and 1974 transportation plans developed by the Metropolitan
Transportation Commission with technical study grants did
not address the specific transportation needs of elderly
and handicapped persons. The programs addressed these needs
in an indirect manner, such as the following policy statement
from the 1974 plan.

"The major high-priority project of all
other transit needs is the provision of increased
levels of service to low-mobility groups for a
variety of trip purposes including social, recrea-
tional, medical, educational and employment trips.
Unique services are likely to be needed to reach
target low-mobility groups, such as demand-
responsive systems. To some extent in the past
these transportation costs have been incorporated
in the budgets of various social service agencies.
In the future it can be anticipated that the cost
of augmented transit for special groups will be-
come increasingly a part of the public transporta-
tion sector's responsibility."
Although this planning did not identify any programs to meet the transit needs of elderly and handicapped persons, it did describe studies that were underway to identify their needs as well as those of poor persons.

In smaller urban areas, transportation planning appeared more responsive to the transportation needs of the elderly and handicapped before UMTA placed greater emphasis on these needs. We found that urban areas such as New Bedford and Fall River, Massachusetts; Fresno and Santa Clara, California; and Portland, Maine--areas where public mass transportation has generally existed only for a few years--were more responsive to planning for the transportation needs of elderly and handicapped persons. For example:

--In January 1973 the New Bedford and Fall River, Massachusetts, area, funded by an UMTA technical studies grant, developed a transportation plan and a special needs survey of the area's low-income, elderly, and handicapped persons. The plan called for a combination of more frequent service with standard transit buses and specialized service for elderly and handicapped persons with wheelchair-accessible buses.

--In April 1974 Fresno County, California, began studying the transportation needs of elderly and handicapped persons as part of developing its regional transportation plan. The plan, adopted in March 1975, called for a special demand-responsive transportation system for mobility-limited residents.

--In June 1972 Santa Clara County, California, established a policy to provide transportation for elderly and handicapped persons, including those confined to wheelchairs. This policy was to be implemented with special transit services, but by May 1975, because of lawsuits filed by local taxicab companies, Santa Clara County had greatly curtailed these special services, and had begun to plan for full accessibility on its standard transit buses.

--In May 1974 Portland, Maine, funded by an UMTA technical studies grant, began to update its basic plan resulting in an extensive service and routing plan including the transportation needs of elderly and handicapped persons. However, Portland relied
on 1970 census data and no studies had been done to specifically identify who the elderly and handicapped were, where they lived, and what their transportation needs were.

However, this responsiveness to the transportation needs of elderly and handicapped persons was not evident in all smaller urban areas in our review. In the Monterey Bay area in California, little had been done to plan transit services for elderly and handicapped persons. An area planning official attributed this lack of progress to a lack of interest on the part of handicapped persons, the inability of local officials to coordinate the area's transit services, insufficient data on the transportation needs of elderly and handicapped persons, and a lack of policy guidance from UMTA. However, this official noted that since April 1976 when UMTA issued its regulations on transportation for elderly and handicapped persons (discussed in ch. 3), efforts have been undertaken to develop data on transportation needs of the elderly and handicapped persons in the area, and to develop an awareness among them that they can participate in the transit-planning process.

The lack of participation by elderly and handicapped persons in the Monterey area transit-planning process has been a problem in planning transportation to meet their needs, according to local transit officials. These officials attributed this lack of participation to a general passiveness on the part of elderly and handicapped persons and on a lack of consensus among them on what should be done.

Increased UMTA emphasis

UMTA officials stated that even though section 16 requirements have been in the act since October 1970, UMTA has just recently started to enforce these requirements. One regional director noted that late in 1974 UMTA began to emphasize transportation needs of elderly and handicapped persons, apparently in response to external pressures. For example, an October 1974 memorandum from UMTA headquarters to all UMTA regions requested a compilation of elderly and handicapped planning activities. The memorandum stated that the information was needed for a lawsuit filed against UMTA.

In December 1974 UMTA headquarters requested its regional offices to expand their efforts regarding transit planning for elderly and handicapped persons because in fiscal year 1974 only about 10 percent of planning in urban
areas considered their transit needs. According to some UMTA regional officials, before that time UMTA headquarters had not urged inclusion of an elderly and handicapped element in the plans, and had provided very little guidance to the regions and grantees.

In November 1974 UMTA and the Federal Highway Administration proposed joint planning and programming regulations for urbanized areas. These regulations, which were finalized in September 1975, replaced UMTA's prior planning instructions and required that urbanized areas develop programs to establish an urban transportation system covering all modes of surface transportation. These programs were to include special efforts to plan mass transportation facilities and services that could be effectively used by elderly and handicapped persons.

These recent actions by UMTA appear to be resulting in urban transportation planning which better addresses the transportation needs of elderly and handicapped persons.

For example, in February 1975 Boston's MBTA adopted a special needs transportation policy and established an Office of Special Needs to address the transportation problems of elderly and handicapped persons. In October 1975 the Massachusetts Executive Office of Transportation and Construction, responsible for transportation planning in the Boston area, submitted a 5-year transportation plan to UMTA. This program contained a section describing the various transportation programs implemented or planned for elderly and handicapped persons in the Boston area. The programs included half-fare service, "knocker" buses, 1/ minibus routes, a demonstration of lift-equipped vehicles, and rapid transit station improvements. This plan was the first for the Boston area to include a specific section on transportation for elderly and handicapped persons.

In March 1976 MBTA hired a consultant to develop implementable transportation plans for elderly and handicapped persons. Major objectives of the study were to develop

---data on the number of handicapped persons by location and severity of handicap,

---Buses equipped with suspension systems to lower and raise the front of the bus thus reducing the distance from the street to the first step.
--costs and benefits for alternative methods for serving elderly and handicapped persons, and
--a plan for special services.

This study was the first attempt to develop data on these matters for the Boston area specifically, and was undertaken as part of the MBTA's efforts to provide transportation for elderly and handicapped persons. UMTA awarded a technical studies grant to the MBTA to fund the project.

According to the consultant's preliminary estimates, the capital cost for fully accessible MBTA stations and vehicles would be about $60 million plus annual operating costs of $2.4 million. Capital costs include about $22 million for 80 elevators at 42 stations, and about $38 million to equip buses, streetcars, and commuter trains with wheelchair lifts.

Another example of where UMTA's recent actions have affected planning for transportation of elderly and handicapped persons is in San Francisco, where the Metropolitan Transportation Commission is responsible for regionwide transportation planning in the Bay Area. Although the Commission's 1973 and 1974 planning documents did not specifically address the transportation needs of the elderly and handicapped, noticeable improvement was evident in the 1975 and 1976 plans. For example, in its 1975 transportation plan, the Commission revised its policy statement on providing transportation for elderly and handicapped persons as follows:

"Transportation program designed to solve the transit problems of the handicapped, children, aged and other non-drivers shall be an integral part of regional transportation planning. The range and availability of mobility options for the non-driver shall be increased and physical barriers to the use of transit systems shall be minimized for handicapped passengers."

The 1975 plan did not contain transit projects specifically for elderly and handicapped persons. However, the 1976 plan designated $4.4 million specifically for transit improvements for elderly and handicapped persons, although more than half of that amount was allocated to Santa Clara, for wheelchair-lift-equipped buses.
According to Commission officials, 2 to 3 years were lost in developing a transit program for elderly and handicapped persons because of a lack of specific policy guidance from UMTA. They believed that without a specific UMTA requirement, the largest urban transit operators—the San Francisco Municipal Railway (Muni) and Alameda Contra Costa Transit (AC Transit)—did not feel obligated to provide service to elderly and handicapped persons. According to an official of the Public Utilities Commission, which regulates area transit, more progress toward meeting the transportation needs of elderly and handicapped persons could have been made if (1) data were available on the number, location, and needs of this transit dependent group and (2) specific Federal guidelines had existed earlier.

In 1976 the Metropolitan Transportation Commission adopted a 5-year transportation plan. Most of the nine transit operators in the Commission's jurisdiction have specific programs to provide transportation for elderly and handicapped persons in this plan; however, Muni and AC Transit at the time of our review had not planned any such programs.

In order to force the larger operators to comply with its policy of providing transit service to elderly and handicapped persons, which was adopted after UMTA issued its proposed regulations, the Commission passed a resolution in January 1976 to cut off transit aid after July 1, 1977, to any operator which had not demonstrated "good faith" progress in planning transportation services for elderly and handicapped persons.

PROVIDING URBAN MASS TRANSPORTATION THAT ELDERLY AND HANDICAPPED PERSONS CAN USE

UMTA makes capital assistance grants under sections 3 and 5 of the act to urban areas for facilities and transit equipment to improve their public transit systems. UMTA provides 80 percent of the net cost of eligible projects and the remainder is provided from non-Federal sources. Information on UMTA capital grants awarded to provide transportation for elderly and handicapped persons has not been developed for periods before fiscal year 1974. During fiscal years 1974-76, including the transitional quarter, UMTA approved $36.5 million in capital assistance grants to provide transportation for elderly and handicapped persons. This amount represents about 1 percent of the total UMTA capital grant funding during this period, as shown in the following table.
In fiscal year 1974, before the section 16(b)(2) program began, UMTA funded only $2.6 million for capital projects specifically for the transportation needs of elderly and handicapped persons. Section 16(b)(2) provides for UMTA to make grants to private nonprofit organizations to provide transportation to meet the needs of elderly and handicapped persons when the service provided by the local transit authority is either unavailable, insufficient, or inappropriate. Of the $36.5 million approved for fiscal years 1975 and 1976 and the transitional quarter for transportation of elderly and handicapped persons, $21.3 million (about 59 percent) was approved under the section 16(b)(2) program. In addition, UMTA plans to award another 48 grants for about $21.5 million under its section 16(b)(2) program from fiscal year 1976 and the transitional quarter allocations.

Capital assistance provided to public mass transportation systems

UMTA evaluates capital grant applications to make sure that they conform to the priorities established in the urban

### UMTA Capital Funding (note a)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total UMTA Capital Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Grants</td>
</tr>
<tr>
<td>1974</td>
<td>172</td>
</tr>
<tr>
<td>1975</td>
<td>251</td>
</tr>
<tr>
<td>1976</td>
<td>216</td>
</tr>
<tr>
<td>Transition Quarter (note b)</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>686</td>
</tr>
</tbody>
</table>

a/Includes capital grants awarded under sections 3, 5, and 16(b)(2) of the act.

b/July 1, 1976, through September 30, 1976.
areas' transportation planning. UMTA's evaluation of applicants' methods to implement special efforts planned for transportation of elderly and handicapped persons has been left largely to the discretion of its transit assistance representatives. This evaluation is based on a review of application material which explains how a project relates to an urban area's planning for elderly and handicapped persons.

Capital assistance did not always result in transit needs of elderly and handicapped persons being met.

UMTA has made some capital improvement grants to transit systems which did not provide for the transportation needs of elderly and handicapped persons on their regular transit service and where adequate alternative service was not provided for them.

For example, in San Francisco, the Muni did not provide transportation services which elderly and handicapped persons could use effectively. In June 1974 UMTA approved Muni's capital grant application to replace transit vehicles and modernize streetcar tracks to accommodate light rail vehicles, among other capital improvements.

The application cited only the inclusion of additional stanchions (vertical handrails) and special door lights as provisions for meeting the transportation needs of handicapped persons on its light rail vehicles. The application further noted that Muni's light rail vehicle stations were equipped with elevators that could carry handicapped persons from the sidewalk level to its trains which were boarded from level-entry platforms. The stations were actually substations of the Bay Area Rapid Transit District (BART) system and the elevators referred to were installed by BART. However, the Muni stations were accessible to the handicapped only along the main downtown thoroughfare served by BART, and did not extend to San Francisco's residential neighborhoods where the light rail vehicles were planned to operate above ground requiring step entry.

To alleviate the problem of entry by nonambulatory persons using the vehicles outside of the BART system, platforms the same height as the transit car floors were needed. Such platforms were not included in the approved capital grant and no provisions were made for resolving the access problems of the nonambulatory along the aboveground portions of the light rail system.
To gain support for the platform proposal, officials of a local group interested in removing architectural barriers wrote to UMTA in December 1974 expressing their concern that many of the streetcar track improvements would be undertaken before agreement was reached on the platforms. UMTA told them that the controversy was a local matter and that UMTA would work with the local agencies when general agreement was reached.

This situation apparently was resolved locally because in June 1975 the San Francisco Public Utilities Commission, which regulates Muni, delayed a major rerailing project until Muni could assure that its light rail vehicle system would be wheelchair accessible. The local group applied constant pressure for 18 months to persuade city transit officials to undertake a feasibility study on making the system fully accessible. In May 1976 Muni undertook a feasibility study on constructing level-entry platforms along the aboveground portions of the light rail system. If constructed, the platforms would alleviate the problem of entry by nonambulatory persons because the height of the platforms would be the same as the transit car floors.

We recognize that it is UMTA's general policy to have local areas decide the transit services to be provided that will meet the transportation needs of elderly and handicapped persons. In San Francisco this transportation was provided by private nonprofit organizations. However, the Metropolitan Transportation Commission had not addressed this alternative service in its planning, and, as explained on pages 23 and 24, alternative service was not provided uniformly to all areas where it was needed in San Francisco.

Monterey County, California, is another example of where the transit operator did not provide services specifically for elderly and handicapped persons. In June 1975 UMTA approved a capital grant for new buses for this operator. The grant application noted that the buses would be equipped with some features useful to elderly and handicapped persons, such as

- additional stanchions, grab rails, high visibility step tread edges, and exterior lighting;

- public address systems to announce transfer locations; and

- more comfortable and safer seats.
Also, a provision in the bid specifications gave preference to any manufacturer who submitted a bid including a step height of 8 inches. However, none of the manufacturers which submitted bids complied with the requested 8-inch step height, so the requirement was dropped. Also, the specification for the public address system was withdrawn because UMTA considered it frivolous. According to the operator the buses were delivered in May 1976.

Transportation services for elderly and handicapped persons in Monterey County are provided by four community organizations. The transit operator said that the lack of comprehensive service and the use of unreliable equipment had been major problems with this arrangement.

In May 1976 the Monterey County Transportation Commission appointed a subcommittee to develop alternative proposals for providing transit services for the elderly and handicapped in an attempt to resolve these problems and meet UMTA's April 1976 regulations; however, at completion of our fieldwork in September 1976, no decision had been reached. As noted on page 9, elderly and handicapped persons in Monterey have not shown interest in participating in the planning process, which has been a problem for local transit officials in planning transportation to meet their needs.

In some urban areas, such as Boston, Massachusetts; Fresno, California; and Portland, Maine, some progress has been made by capital grantees in addressing the transportation needs of elderly and handicapped persons. Some of the progress has been made without Federal financial assistance.

In Boston the MBTA has made several attempts to provide special service to elderly and handicapped persons. However, these efforts have had only limited success.

In 1973 the MBTA established seven fixed routes designed for the elderly in several communities as a result of pressure by elderly groups. Ten minibuses were purchased with UMTA capital grant funds. However, four of the seven routes were terminated on June 30, 1976, primarily because of low ridership.

In 1975 the MBTA retrofitted a full size bus with a lift, securement devices for eight wheelchairs, and other improvements for about $5,000. The bus was available for charter at one-half the normal charter rate, but use has been very limited. Neither UMTA nor MBTA has attempted to determine the factors for low use of either project.
In June 1975 UMTA approved an MBTA capital grant application for the purchase of 15 new buses equipped with wheelchair lifts and for retrofitting 3 existing buses with wheelchair lifts. However, action on these lift-equipped buses has been deferred because of low use of the one lift-equipped bus and until the demand for such buses can be determined.

The MBTA has made some efforts to improve its regular transit system to help meet the transportation needs of elderly and handicapped persons. Although none of the MBTA rail stations and fixed-route vehicles are fully accessible to the nonambulatory handicapped, MBTA has undertaken construction projects with UMTA capital grant assistance which will (1) provide one new rapid transit station which will be fully accessible to wheelchair users and (2) add elevators and ramps to make three existing stations fully accessible. Also, since November 1975, MBTA has operated 75 "kneeler" buses procured with UMTA capital grant assistance on its regular routes. In June 1975 UMTA had approved an MBTA grant application for the purchase of an additional 128 "kneeler" buses. The project manager of the MBTA's Office of Special Needs, who is a wheelchair user, estimates that 90 percent of the elderly and handicapped population can be served by such features as the "kneeler" buses and escalators. Precise figures were not known. As discussed on pages 10 and 11, in March 1976 the MBTA contracted for a study to develop (1) data on the number of handicapped persons by location and the severity of their handicaps and (2) a plan for special services.

In Fresno, California, UMTA approved a capital grant in June 1975 to purchase 50 buses and related equipment. The grant application stated that the transit needs of elderly and handicapped persons were addressed by (1) improving service in areas many of them live, (2) reducing their fares, (3) adding safety devices and better lighting on the buses, and (4) instituting special transit service for those persons physically unable to use the regular service. The special service began in July 1975 with city and State funds to purchase and operate seven demand-responsive vans, three of which had wheelchair lifts.

In a third urban area--Portland, Maine--UMTA awarded the Greater Portland Transit District two capital grants, neither of which provided for the transportation needs of handicapped persons. The first grant application, approved in December 1972, did not address the needs of elderly and handicapped persons. The second grant application, approved in June 1975,
stated that the bus specifications provided for certain safety and comfort features which would be helpful to elderly and handicapped persons. The applications also pointed out that, while no satisfactory transportation service existed for this group, the District's plans to meet these needs included half-fare services, specially equipped vehicles, and consolidation of limited transportation services provided by several social service agencies.

To implement these plans, a nonprofit agency was established in October 1975 to provide special transportation for elderly, handicapped, mentally retarded, and low-income persons in the Portland area. The agency administers the District's half-fare program for elderly and handicapped persons and free-service program for low-income persons. The agency provides a combination of fixed-route and demand-responsive services with a fleet of 10 vehicles. None of the vehicles are equipped to handle wheelchairs; however, four additional vehicles, two of which will be equipped with wheelchair lifts, are being procured with financial assistance from UMTA's section 16(b)(2) program.

According to a 1975 study, there is a lack of specific data on the handicapped in the Portland area and the records are not clear as to what extent the specially equipped vehicles will meet their transportation needs. Other than the 1970 census, no studies have been conducted to determine who the handicapped are, where they live, and what their transportation needs are.

One urban area in our review which appears to have considered the needs of elderly and handicapped persons from the time it first applied for UMTA capital grant assistance was New Bedford, Massachusetts. The Southeastern Regional Transit Authority, the grantee, in its plans and subsequent studies, identified a need for specialized services for elderly and handicapped persons. Through the use of a questionnaire distributed by social service organizations to the area's low-income, elderly, and handicapped residents, special transportation needs were identified. The plan recommended the purchase of 10 specially adapted buses, including 2 equipped for wheelchair access.

The Authority's June 1974 application for an UMTA capital grant included the purchase of 10 smaller buses, 2 with wheelchair lifts. The full-size buses requested in the grant also included certain safety and comfort features to make them more accessible to the elderly and handicapped. Eight of the smaller buses had special "kneeling" features.
However, instead of purchasing the two buses equipped with wheelchair lifts, the Authority, with UMTA capital grant assistance, retrofitted one used bus with a wheelchair lift, a front step which lowers, and room for four wheelchairs. The bus began operating in January 1976. In June 1976 it had 105 subscribers, of which only 5 were wheelchair users. Neither UMTA nor the Authority knew the reasons for its limited use. At the same time the Authority was also retrofitting a second bus. The total cost of retrofitting the two buses was estimated at $13,000, whereas the estimated cost of purchasing two new buses similarly equipped was $107,000.

UMTA's reluctance to approve fully accessible buses

UMTA has been reluctant to approve capital grants to several mass transit operators to make their systems fully accessible for elderly and handicapped persons in urban areas where a genuine interest has been expressed for doing so.

In July 1973 AC Transit, in Alameda and Contra Costa Counties, California, submitted a capital grant application to UMTA for 36 buses to provide feeder service to the BART system. In compliance with BART's policy of full accessibility, AC Transit's grant application was for buses with wheelchair lifts. UMTA responded by advising that it would be more feasible to place in service a limited number of small buses specifically designed and equipped for handicapped persons. UMTA believed that bus manufacturers would not submit responsive bids for buses equipped with wheelchair lifts.

A local representative of handicapped persons who is an advocate of full accessibility learned of UMTA's position on the lifts and wrote to several Members of Congress to reverse it. The UMTA Administrator, responding to congressional inquiries, stated that UMTA did intend to approve the project with the lifts as original equipment.

The grant to AC Transit was approved in May 1975; however, while reviewing the market for accessible buses, AC Transit was informed by major bus manufacturers that they would not bid on specifications which required the buses to be equipped with wheelchair lifts. Lacking an alternative, standard transit buses were purchased without wheelchair lifts, and AC Transit intended to retrofit the buses when acceptable lift devices could be procured. According to AC Transit officials, the buses have been in service without
lifts since late 1975, but no attempt has been made to pro-
vide the elderly and handicapped with alternative transit
service and UMTA did not require that it be provided.
Although the matter of obtaining standard transit buses
equipped with wheelchair lifts had been an issue for several
years, it was not until June 1976 that UMTA contracted for
the development of an appropriate wheelchair lift device,
as discussed on page 38.

In Santa Clara County, California, the transit authority
had attempted to provide specialized bus service for elderly
and handicapped persons but largely curtailed that service
when it was sued by several taxicab companies. Therefore
the authority adopted a policy of providing full accessibili-
ity for all elderly and handicapped persons. Early in 1974
it applied to UMTA for a capital grant for new buses
equipped with wheelchair lifts. UMTA discouraged the author-
ity from seeking bids for buses with wheelchair lifts because
of the bus manufacturing industry's reluctance to provide
them. UMTA believed it would take an unnecessarily long time
to get a bid on such buses and the new buses were urgently
needed to replace badly deteriorated old buses. The
Authority reluctantly agreed and withdrew its requirement
for wheelchair lifts. In May 1976 UMTA approved the grant
for buses that were not fully accessible.

Advocates of fully accessible mass transportation
believed that UMTA's reluctance to fully support these acces-
sible systems contradicts its policy of letting urban areas
decide the types of mass transit services they will plan and
implement to meet the needs of elderly and handicapped per-
sons. UMTA maintained that the manufacturers of standard
transit buses have been unwilling to manufacture buses with
wheelchair-lift devices and to insist that they do so would
have needlessly delayed procuring otherwise badly needed
buses. In addition, UMTA believed that it is difficult to
justify the additional cost of lift-equipped buses when the
urban areas do not have specific data on their use.

However, since UMTA issued its regulations on transpor-
tation for elderly and handicapped persons, which requires
that beginning in February 1977 manufacturers of standard
transit buses must offer vehicles with an optional
wheelchair-accessible device, such vehicles have become com-
mercially available. In Los Angeles, California, the South-
ern California Rapid Transit District, which is committed to
providing full accessibility on its standard route vehicles,
received bids for wheelchair-accessible standard transit buses from all three major bus manufacturers in September 1976.

In October 1976 the Southern California Rapid Transit District requested UMTA approval to purchase 200 buses, under an approved capital grant, with wheelchair-accessible devices. Although the buses so equipped would cost an additional $1.6 million and the District could not predict how much persons confined to wheelchairs would use them, UMTA approved the purchase. While UMTA officials believed that specialized separate transit services could economically and safely provide transportation for severely handicapped persons, including those confined to wheelchairs, they said they would not refuse to approve the purchase of fully accessible equipment if local transit officials manifested a strong desire to make a regular transit system fully accessible.

Capital grant projects approved since the issuance of UMTA regulations

We made a cursory review of five UMTA capital grants approved since UMTA issued its regulations on transportation for elderly and handicapped persons in April 1976. We found that these grant applications, approved in September 1976, more specifically addressed the matter of providing transit services that elderly and handicapped persons can use effectively, as follows:

-- A capital grant application approved for the Metropolitan Transit Authority in Nashville and Davidson County, Tennessee, stated that a study of the transportation needs of elderly and handicapped persons was underway so that the Authority could better meet those needs, and three of its buses were specially equipped for providing special transit services for elderly and handicapped persons.

-- In evaluating a capital grant application from the Village of Downers Grove, Illinois, UMTA noted that the Village had made special arrangements with local taxicabs to provide transportation for persons who could not use its buses.

-- A capital grant application approved for Burlington, Iowa, noted that special transit service would be provided on a demand-responsive basis with a lift-equipped bus for persons who could not use regular
buses, and that this service was being studied with a view toward expanding it.

--A capital grant application approved for the Western Reserve Transit Authority in Youngstown, Ohio, stated that the Authority, in an effort to make mass transit available to all residents, had assumed management of the Youngstown Community Development Agency's special transportation program for elderly, handicapped, and low-income persons, and that the application being submitted was for a grant to purchase buses equipped with wheelchair lifts to provide special transit services for persons who could not use regular buses.

--A capital grant approved for the Niagara Frontier Transportation Authority in Buffalo, New York, stated that while the grant was for design and engineering of the Authority's proposed light rail vehicle system, all the stations were planned to be accessible by elderly and handicapped persons, and the Authority had also undertaken a study to determine all the transit needs of elderly and handicapped persons in its service area.

Capital assistance provided to private nonprofit organizations

UMTA awards capital grants under section 16(b)(2) of the act to State agencies on behalf of private nonprofit organizations to provide transportation service to elderly and handicapped persons for whom such service is unavailable, insufficient, or inappropriate. UMTA apports section 16(b)(2) funds to State agencies, designated by their respective Governors. These agencies are responsible for selecting projects, preparing applications, and insuring that vehicles and equipment are procured according to established State procedures. UMTA provides 80 percent of the capital cost of eligible projects. The remaining 20 percent is provided by non-Federal sources.

In fiscal year 1975, the first year of the program, about $21 million was available for the section 16(b)(2) program. Grants totaling $20.6 million were made to participating States on behalf of approximately 1,000 private nonprofit organizations to purchase approximately 2,300 vehicles. The States of Vermont, Georgia, Delaware, and West Virginia did not participate in the fiscal year 1975 program because their State laws prohibit contracting with private nonprofit organizations, or they elected not
to participate. In fiscal year 1976, approximately $22 million had been made available for the program.

An UMTA official told us that data has not been compiled to assess how effectively the transportation needs of elderly and handicapped persons are being addressed under the section 16(b)(2) program for fiscal year 1975 because the program is new and only a few vehicles have been put in service. However, in February 1976 UMTA undertook a study to assess the effectiveness of the program. As of November 1976 this study was in the data collection phase, and was planned to be completed early in 1977.

Some organizations that have received vehicles said that they were being well utilized and that attendance at health and nutrition centers by elderly and handicapped persons had increased, especially those who were neglecting their health needs due to a lack of transportation. Other grantee organizations had not measured impact because they had not been providing this service long enough, or they did not know how many elderly and handicapped persons live in their service area, and their transportation needs. Therefore, the organizations could not compare the impact of their efforts to the total needs.

Some representatives of private nonprofit organizations said they believed that the section 16(b)(2) program favors the more affluent private nonprofit organizations, because many agencies do not have the financial resources to meet application requirements, and some agencies were concerned about whether they would be able to generate sufficient funds to operate their vehicles. For example, in California, an agency was approved by the State to receive 22 vehicles under the section 16(b)(2) program to provide badly needed transportation for social service agencies in low-income neighborhoods in San Francisco. However, it had to withdraw from the fiscal year 1975 program because it could not raise its 20-percent matching share for the cost of the vehicles. Similarly in Massachusetts six private nonprofit organizations had to withdraw from the program after they had been approved to receive vehicles because they could not raise their 20 percent of the purchase price.

State officials said that because the States' programs were already established for fiscal year 1975, UMTA instructed them to redistribute the vehicles to other agencies that could afford them and that had been approved for that
year's program. UMTA and State transportation officials in California admitted that places exist where substantial need has been identified but the social service agencies cannot participate in the section 16(b)(2) program due to poor financial condition.

Other private nonprofit organizations in California that were able to raise their 20-percent matching share are concerned about whether they will have enough money to operate the vehicles they are receiving under the program. One organization was undertaking a fundraising program to obtain operating money.

Some of the organizations in Massachusetts were also concerned about having sufficient funds to operate their vehicles. One organization providing transportation for elderly and handicapped persons in Boston was temporarily receiving operating funds from the city of Boston but did not have a permanent source of revenue. Another organization serving Cape Cod received operating funds from a variety of private and public sources; however, it had no assurance that these funding sources would continue. These organizations did not know how they would generate operating funds if their funding sources were terminated.

One grantee organization in California indicated that it would prefer not to be involved in the section 16(b)(2) program because transportation should be provided by the large public transit operators who have expertise and a better funding source. However, this grantee felt forced into the program because the local public transit operator was not responding to the needs of the elderly and handicapped community.

A 1974 UMTA-funded study prepared for the San Francisco metropolitan planning organization supported this grantee's complaint about the program. Of over 1,500 social agencies that were reviewed within this study, the majority of agencies providing transportation were having difficulties, were unhappy with what they were doing, felt they had been forced into transportation operations, and would like to be out of the transportation business.

The study concluded that public transportation in the area had become a two-tier system. The first tier was the regularly scheduled and routed buses, streetcars, and trains operated by the mass transit operators. The second tier was a potpourri of social agency-operated transportation
services tailored to the needs of their clients who could not use the regularly scheduled buses. The study also concluded that there was a need for the two-tier system and recommended that it be provided by the mass transit operators. However, the recommendation was never implemented because the transit operators believed they were not obligated to do so because they had not been involved in the survey.

An UMTA official told us that they did not intend to let the section 16(b)(2) program be manipulated in a manner which would let local public transit authorities escape their responsibilities to provide acceptable levels of transportation which elderly and handicapped persons could use effectively. UMTA stated that it would not consider transportation services provided by private nonprofit organizations as acceptable levels of specialized transportation for elderly and handicapped persons unless

---private nonprofit organizations were programmed to do so in the transportation improvement program,

---transportation services provided were not restricted to the clientele of any particular organization,

---service provided was appropriate for persons confined to wheelchairs and semiambulatory persons, and

---fares charged were comparable to those of the public transit system.

UMTA officials also said that while UMTA cannot provide operating funds to private nonprofit organizations under section 16(b)(2), it can provide them under section 5 of the act. In addition to providing financial assistance for capital projects, section 5 provides funds for operating expenses which UMTA can grant to urban areas of 50,000 or more population. These operating assistance grants are awarded to designated recipients which are responsible for submitting grant applications to UMTA for operators included in the area's transportation improvement program. The grant application could include private nonprofit organizations providing specialized transportation for elderly and handicapped persons with vehicles acquired under section 16(b)(2).

Operating assistance funds are limited and have been allocated to specific urbanized areas by a formula provided
in section 5 of the act. When more than one operator is programed to provide transit service in an urban area, local officials must decide how the total allocation will be divided. UMTA does not get involved in these decisions, but grants the funds accordingly if the application does not ex-
ceed the urban area's allocation and meets UMTA's other requirements.

UMTA officials stated that when private nonprofit organizations are included in the transportation improvement program to provide a second tier of transit for elderly and handicapped persons but cannot get included in the designated recipients' application for operating funds, another designated recipient can be established in their behalf. Also, private nonprofit organizations can contract with the public transit operators in urban areas, which in turn can include these contract costs as eligible expenses for section 5 grants.

UMTA's section 16(b)(2) program instructions for fiscal year 1976 have been expanded and are more specific than the instructions for fiscal year 1975. These instructions re-
quire that private nonprofit organizations applying for these funds assure that they will have adequate operating funds. These instructions also provide that, in urbanized areas, operating assistance can be made available to private nonprofit organizations under existing procedures for section 5 grants.

CONCLUSIONS

Before 1975 UMTA's actions to insure that urban mass transportation was planned and implemented so that it would meet the transportation needs of elderly and handicapped persons were generally passive and unresponsive to those needs. Some UMTA capital grants have been made to transit authorities in urban areas where efforts to provide trans-
portation for elderly and handicapped persons had not been made or did not successfully meet their needs. However, UMTA's actions during 1975 and 1976 generally were more responsive and were resulting in the planning and implemen-
tation of more urban mass transportation that can be more effectively used by elderly and handicapped persons.

UMTA had been reluctant to grant projects for making transit systems fully accessible. UMTA's reluctance, in large part, was due to its belief that bus manufacturers
would not submit responsive bids for accessible buses, which in turn would slow the acquisition of otherwise badly needed buses. However, this matter apparently has been resolved since UMTA issued its regulations on transportation for elderly and handicapped persons because bus manufacturers have submitted responsive bids for wheelchair-accessible buses.

We acknowledge UMTA's policy of letting urban areas decide how they will provide for the transportation needs of elderly and handicapped persons. However, when local transit officials have decided to let other agencies in the local transit authority's service area provide for these needs, UMTA should require the local transit officials responsible for providing transit services and who receive Federal grants for operating and capital projects to make sure that such agencies receive adequate funds for appropriate capital investments and operations so that acceptable levels of service can be provided to elderly and handicapped persons throughout the urban area.

RECOMMENDATION

We recommend that the Secretary of Transportation direct the Administrator of UMTA to:

--- Expand the regulations on transportation for elderly and handicapped persons to require local transit authorities receiving UMTA funds to make sure that, when it has been decided that other local agencies will be responsible for providing specialized transit services for elderly and handicapped persons, such agencies have sufficient investment and operating funds to provide acceptable levels of services to meet these needs in an urban area.
CHAPTER 3

UMTA'S REGULATIONS TO IMPLEMENT THE
NATIONAL POLICY THAT MASS TRANSPORTATION
BE USABLE BY ELDERLY AND HANDICAPPED PERSONS

After the Urban Mass Transportation Act of 1964 was amended in October 1970, two opposing interpretations of section 16(a) developed and resulted in a legal controversy between advocates of fully accessible public transportation and UMTA. (These matters are discussed in ch. 5.) Although UMTA's interpretation is consistent with its policy of letting local areas decide the type of public transportation they will implement, UMTA did not believe it was required to issue regulations to implement the law. However, local transit officials did not always have a clear understanding of what was required of them, and several urban transit authorities and operators were being sued to make their standard public transit systems fully accessible. To settle one of these lawsuits in October 1974, UMTA agreed to issue regulations on transportation for elderly and handicapped persons.

In February 1975 UMTA published proposed regulations on transportation for elderly and handicapped persons. Public hearings were held to allow transit operators, manufacturers, and elderly and handicapped organizations to comment on the proposed regulations. In April 1976 UMTA published final regulations.

DEVELOPMENT OF THE REGULATIONS

In November 1970, shortly after the act was amended, UMTA issued the following guidelines to grantees under its capital grant program.

"In the planning and design of mass transportation facilities and equipment, reasonable efforts should be made to ensure that elderly and handicapped will be able to effectively use the facilities. A description of these efforts must be in the final application."
A sample capital grant application format was provided for applicants, explaining the capital grant application documentation required to describe the efforts the applicant would make to enable elderly and handicapped persons to use mass transportation effectively. Applicants were required to include a description of any studies or plans that address

- the transportation needs of elderly and handicapped persons,
- facts about their percentage of the population,
- programs and institutions devoted to their needs, and
- costs of special equipment or facilities.

UMTA officials believed that UMTA was not required to issue regulations to implement the law, and elected instead to provide grantees with these guidelines. However, grantees did not always have a clear understanding of what was required of them in addressing the transportation needs of elderly and handicapped persons. UMTA did not define what it meant by the term "reasonable efforts," and UMTA capital grant representatives were left to carry out the legislative mandate as they believed appropriate on an informal, case-by-case basis. The above written requirements and the experience of UMTA capital grant representatives were the only basis for evaluating whether capital grantees adequately addressed the transportation needs of elderly and handicapped persons.

This situation generated several law suits, usually by organizations representing handicapped persons who sued local transit authorities and operators to make public transportation more accessible to handicapped persons. In one of these cases, Disabled in Action of Baltimore, et al., v. Hughes, et al., a disabled veterans group, an elderly citizens group, and two disabled individuals confined to wheelchairs filed a civil action against the Maryland Secretary of Transportation, the U.S. Secretary of Transportation, and the Administrator of UMTA. The suit alleged among other things that the U.S. Department of Transportation was failing to implement section 16 of the act. The case was dismissed when the parties reached certain agreements in October 1974. One of the agreements was that UMTA would develop regulations implementing section 16 of the act within 1 year.

On February 26, 1975, UMTA published proposed regulations to codify existing requirements and to establish new requirements relative to transportation for elderly and handicapped persons. UMTA invited all interested parties to comment on
the proposed regulations and 324 comments were submitted by various groups, including transit operators, manufacturers, elderly and handicapped groups, and individuals. During April 1975, UMTA held public hearings on the proposed regulations in six cities. UMTA believed that the advice received from the comments and hearings, although sometimes conflicting, was helpful and the proposed regulations were revised to reflect that advice.

FINAL REGULATIONS ON TRANSPORTATION FOR ELDERLY AND HANDICAPPED PERSONS

On April 30, 1976, UMTA published final regulations to establish its requirements on transportation for elderly and handicapped persons. The regulations are applicable to all mass transportation capital, operating assistance, and planning projects approved by UMTA on or after May 31, 1976.

The preamble to the regulations states that UMTA has a goal of

--making regular transit service more accessible to the elderly and handicapped, and

--increasing the level of service for wheelchair users and others who cannot climb steps.

With regard to the latter goal, the preamble states that substantial disagreement exists as to the best type of service for wheelchair users; that is, whether to make regular route service fully accessible, to provide separate specialized service, or a combination of both. UMTA, however, allows local urban transit officials to decide which type of service to provide.

Planning requirements

The final regulations require that after September 30, 1976, the urban transportation planning process must include special efforts to plan public mass transportation facilities and services that can be used effectively by elderly and handicapped persons. The regulations do not specify what special efforts are, but include the following examples of levels of effort deemed to satisfy the requirement:

--A program for wheelchair users and semiambulatory persons requiring annual average expenditures equivalent to a minimum of 5 percent of the urban area's apportionment under section 5 of the act.
--Purchase of only wheelchair-accessible new fixed-route equipment until one-half of the fleet is accessible, or develop a substitute service that will provide comparable coverage and service.

--Any type of system that assures every wheelchair user or semiambulatory person transportation for 10 round trips per week within the service area at prices comparable to those charged for the standard service for trips of similar length.

In addition to the basic planning documents, UMTA requires localities to submit annually a transportation system description document. This document is to include data on the elderly and handicapped, such as their transportation needs, location, percentage of population, and transportation services provided.

**Fixed Facilities Requirements**

The final regulations require the construction, design, or alteration of fixed facilities which are used by the public or in which physically handicapped persons may be employed to be in accordance with the standards of the "American National Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped." In addition, rail stations are to include

--a fare collection area with at least one entrance which is at least 32 inches wide,

--travel distances for handicapped persons who must use elevators to get to trains comparable to that for nonhandicapped persons, and

--level-entry boarding platforms designed with edges of different color and texture from the remaining floor and with a minimum gap between platform edges and rail cars.

These requirements do not apply to fixed facilities being altered if

--application of the standards is not structurally possible, or

--the alterations do not involve areas of the facility which are susceptible to being improved to
Vehicle requirements

The final regulations state that UMTA will approve purchasing new buses which are over 22 feet long only if the specifications include the following:

--A design assuring optional wheelchair accessibility including a level-change mechanism (ramp or lift), sufficient clearances to permit a wheelchair to reach a location where it can be secured, and at least one device to secure the wheelchair.

--A maximum 8-inch height for front door steps, including the first step when measured from a 6-inch curb, and a minimum 12-inch tread for both front and rear steps.

--Clearly legible signs to indicate that the front seats are priority seats for elderly and handicapped persons and to encourage other passengers to make such seats available to them.

--Interior handrails and stanchions arranged to permit easier and safer boarding, onboard movement, seating and standing, and unboarding.

--Slip-resistant surfaces on all floors and steps, and a contrasting color on step edges.

--Step well and exterior lights, shielded from passengers' eyes, which provide a specific level of illumination.

--The farebox located far enough forward to not obstruct passenger traffic.

--Illuminated destination and route signs on the front and boarding sides of each bus.

UMTA will approve purchasing new rapid rail vehicles only if the technical specifications include:

--Passenger doorways with 32-inch openings and audible signals to alert persons when the doors are closing. The doorways must be designed to minimize the gap between the vehicle and the platform when the vehicle operates in a wheelchair-accessible station.
Other requirements for rapid rail cars for priority seating signs, interior handrails and stanchions, wheelchair clearance, and floor surfaces are virtually the same as those for buses.

The technical specifications requirements for new light rail vehicles are virtually the same as those for new buses and rapid rail cars depending on whether they operate in a step-entry or level-entry system. UMTA did not require light rail vehicles to have wheelchair securement devices or level change mechanisms when they operate in a step-entry system, because such devices have not been developed. In June 1976 UMTA undertook a project, discussed on page 38, to develop a wheelchair-lift device for light rail vehicles.

**ELDERLY AND HANDICAPPED PERSONS' OPINIONS OF THE FINAL REGULATIONS**

We discussed UMTA's regulations on transportation for elderly and handicapped persons with representatives of eight national and six local organizations for elderly and handicapped persons. Our discussions with these representatives disclosed that generally they believed UMTA's final regulations are a positive effort toward assuring that mass transportation will be planned and implemented so that elderly and handicapped persons can use it more effectively. However, many of them were concerned that the regulations will not be fully effective because:

--- They allow local officials to decide the type of transportation that will be provided to meet the transportation needs of elderly and handicapped persons.

--- They do not mandate totally accessible buses on regular route service.

--- They do not contain provisions on how UMTA will enforce their compliance.

--- The examples of acceptable levels of effort are not clear.

Those representatives of handicapped persons who believe that all transit services should be totally accessible said that specialized transit systems planned to provide for the transportation needs of elderly and handicapped persons will not provide equivalent service. On the other hand, some
representatives of elderly persons believed that separate specialized transit services would adequately meet their needs. While the transit needs of elderly and handicapped persons are similar in many ways, there is not, in our opinion, a consensus of how to best provide for these needs among elderly and handicapped persons.

CONCLUSIONS

UMTA developed regulations on transportation for elderly and handicapped persons as a result of external pressures rather than in recognition of its legislated mandate. However, the regulations are a positive step toward implementing the national policy on meeting the transportation needs of elderly and handicapped persons.

The regulations are consistent with UMTA's policy of letting local areas decide the types of mass transportation they will implement. UMTA's decision, as reflected in the regulations, to not mandate full accessibility on regular route mass transit systems when equivalent alternative services are provided to meet the transportation needs of elderly and handicapped persons is consistent with that policy.

Although it is too early to measure the impact of these regulations, they should result in more mass transportation service that elderly and handicapped persons can use effectively. However, considering the slow progress that has been made by the transit authorities in the past, it is important that UMTA systematically monitor the impact these regulations have on transit authorities in implementing transportation service that meets the needs of elderly and handicapped persons and is as timely and efficient as the service provided to others.

As UMTA gains some experience with acceptable levels of effort and decisions are made on whether specific efforts have or have not been deemed acceptable, the regulations could be further strengthened by including additional specific examples of the types and degrees of efforts that were acceptable and of those that were not acceptable in carrying out the mandate of the regulations.
RECOMMENDATIONS

We recommend that the Secretary of Transportation direct the Administrator of UMTA to:

--Systematically monitor the impact the regulations are having on transit authorities in providing transportation service to elderly and handicapped persons which meets their needs and is comparable to service provided to others.

--Amend the regulations at a later date to include specific examples of types of efforts that have been considered acceptable and of those that have not been considered acceptable.
CHAPTER 4
UMTA'S RESEARCH AND DEVELOPMENT,
DEMONSTRATIONS, AND SPECIAL STUDIES
PERTAINING TO THE TRANSPORTATION NEEDS
OF ELDERLY AND HANDICAPPED PERSONS

UMTA is authorized under section 6 of the Urban Mass Transportation Act of 1964, as amended, to undertake research, development, and demonstration projects in all phases of urban mass transportation that will assist in (1) reducing urban mass transportation needs, (2) improving urban mass transportation service, and (3) contributing toward meeting total urban mass transportation needs at minimum cost. Under section 16(c) of the act, 1.5 percent of any amounts made available under section 6 may be set aside and used exclusively to increase the information and technology to provide improved transportation facilities and services for elderly and handicapped persons.

From October 15, 1970, through September 30, 1976, the total amount approved under section 6 of the act was approximately $348 million. Of this amount, UMTA approved about $8.5 million for research, development, and demonstration projects, and special studies to exclusively address the transportation needs of elderly and handicapped persons. The following is a breakdown of this funding.

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and development $570,000</td>
</tr>
<tr>
<td>Special studies               1,606,861</td>
</tr>
<tr>
<td>Service and methods demonstration  6,298,962</td>
</tr>
<tr>
<td><strong>Total</strong>                      <strong>$8,475,823</strong></td>
</tr>
</tbody>
</table>

To address the transportation needs of elderly and handicapped persons, UMTA's Office of Technology Development and Deployment has focused its efforts on improving the design of public transit vehicles and facilities to make them more accessible to such persons, while its Office of Service and Methods Demonstrations has developed and demonstrated various
public transit service techniques to improve the mobility of elderly and handicapped persons. In addition, UMTA has sponsored special research studies to learn more about the population characteristics of elderly and handicapped persons, explore their transportation needs and problems in using public mass transit vehicles and facilities, and develop possible solutions to providing improved transportation for such persons.

We reviewed pertinent UMTA research, development, and demonstration projects, as well as special studies for fiscal years 1970 through September 30, 1976, and found that:

--UMTA has completed one major vehicle research and development project—a new design large urban transit bus—which is fully accessible and usable by elderly and handicapped persons including those in wheelchairs; however, UMTA does not believe that it should provide financial assistance to bus manufacturers to help this vehicle into commercial production, and without such assistance private industry does not plan to manufacture it at the present time.

--UMTA's research and development projects relative to rapid rail vehicles used in providing mass transportation are not all addressing the special needs of elderly and handicapped persons, but are planned to culminate in standardization of vehicle features that will meet their special needs.

--UMTA undertook a project to develop and demonstrate a personal rapid transit system. Although this system may be used as a model for similar systems in various cities, it has not yet addressed the transportation needs of all elderly and handicapped persons, which could exclude such persons from using those systems.

--Although UMTA has addressed the transportation needs of elderly and handicapped persons in its demonstration projects and special studies, it has not determined whether and to what extent localities have used the results of such efforts to improve transportation for such persons. In addition, UMTA has not required that all demonstration projects thoroughly address the reasons why people have not used the demonstration service. Without such information,
UMTA and the transit community are not assured of getting the fullest potential value from each demonstration.

--Although UMTA's Office of Service and Methods Demonstrations does communicate the results of its activities concerning the elderly and handicapped to other offices within UMTA through reports and occasional briefings, improved communications could result in greater benefits to potential grantees in developing and implementing their plans for meeting the transportation needs of elderly and handicapped persons.

UMTA's Research and Development Activities

From fiscal year 1970 through September 30, 1976, UMTA approved about $134.3 million for passenger-related research and development projects that have considered the transportation needs of elderly and handicapped persons. Four of these projects, totaling about $570,000, were focused entirely on improving the design of public transit equipment and facilities to make them more accessible and safer for elderly and handicapped persons. These four projects were approved in fiscal years 1975 and 1976 when UMTA renewed its emphasis on addressing the transportation problems and needs of elderly and handicapped persons.

Two of these projects, one to develop wheelchair-lift devices for current standard size buses and the other to develop wheelchair lifts for standard light rail vehicles, were approved in fiscal years 1975 and 1976 respectively. UMTA expects to complete these projects by March 1977 and November 1977 respectively, at which time these lift designs will be made available to manufacturers, and the lift devices will be demonstrated to transit authorities.

UMTA approved a third project in June 1976 to develop safety guidelines for wheelchair-loading equipment and to evaluate different securement systems being offered on the existing market. An UMTA official told us that work on this project is expected to be completed by April 1978, at which time UMTA will make wheelchair-lift and securement safety guidelines available to manufacturers.

UMTA approved the fourth project in June 1976 to determine the feasibility and cost effectiveness of modifying existing escalators to enable elderly and handicapped persons
to use them in those transit stations that have escalators and to develop a prototype device for such modifications of existing escalators. In December 1976 an UMTA official told us that UMTA is still requesting interested bidders to submit proposals to undertake work on the project and that actual work on the project is expected to begin in June 1977. This official also said that the project is planned to be completed in December 1978.

The eight remaining research and development projects considered the transportation needs of elderly and handicapped persons as part of their overall project objectives to improve the technology of various modes of urban mass transportation. UMTA officials were unable to provide us with a complete and accurate breakdown of the $133.7 million showing how much would be used specifically to address the transportation needs of elderly and handicapped persons.

The following table shows the amount of funding approved as of September 30, 1976, for five of the remaining projects which include features for elderly and handicapped persons.

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transbus prototype development</td>
</tr>
<tr>
<td>Small bus project</td>
</tr>
<tr>
<td>Advanced concept train development</td>
</tr>
<tr>
<td>Morgantown personal rapid transit</td>
</tr>
<tr>
<td>Paratransit vehicle technology</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Urban bus technology**

Because all urban public transit systems use buses, the UMTA project with the most potential for contributing to meeting the transportation needs of elderly and handicapped persons was its Transbus project to develop an advanced design 40-foot bus fully accessible by persons confined to wheelchairs. However, UMTA decided to take no actions to get Transbus into commercial production and, therefore, it is not yet available to public transit operators.
In 1971 the Secretary of Transportation announced a program to develop an improved bus because

--UMTA capital assistance was supporting the purchase of buses which had not been improved for 17 years, and

--the public transit operators could not raise sufficient capital to demonstrate the need for an improved bus.

In this program three U.S. manufacturers of large (40-foot) urban transit buses were each to (1) design an essentially new large transit bus, (2) build three full-size operating prototypes of their designs, and (3) test them in urban operating environments. One prototype bus of each manufacturer was to be easily accessible and usable by elderly and handicapped persons, including those confined to wheelchairs.

These new bus designs were to address many aspects of urban transit bus technology so the newly designed buses would be faster, safer, more cost efficient, more attractive to potential riders, and easier and faster to get in and out of. Much of this new technology has been incorporated in current design transit buses. However, the fundamental break from current design and the most important technological aspect regarding the effective use of urban transit buses by elderly and handicapped persons was that the new design buses were to have low floors--23 inches or less above the ground.

Current design buses have floor heights of between 34 and 35 inches which has accommodated rather large underfloor mechanical components, such as transmissions, differentials, axles, brakes, and wheels and tires. Redesigning these components to make them smaller in order to fit under a lower floor and still perform properly has been a major obstacle to successfully meeting program objectives.

However, according to UMTA officials, the prototype buses have been successfully manufactured and tested and the Transbus program is virtually completed with the development of performance specifications for a 40-foot bus with a low floor 22 inches above the street surface. The program has also demonstrated level change devices that permitted elderly persons as well as those in wheelchairs to get on and off the prototype buses.
Transbus underwent public testing which was completed in March 1975. The results of public testing have shown that low floors, low steps, wide doors, and the body design are positive features from both the public and operator viewpoints. Although tire wear during public testing on all the buses was considered comparable with tire wear expected on current buses, the Transbus tire manufacturers expressed concern that further development of the Transbus tires is necessary because those tires were tailor made for Transbus and their complete durability is not known due to limited tire testing. Transbus prototypes of all three manufacturers experienced some problems with tires, transmissions, brakes, or air leaks.

In June 1976 in concluding on the Transbus prototype program, program managers stated that the low 22-inch floor design is feasible in terms of current transit bus operations and highly desired by the public. Two of the three bus manufacturers who participated in the project agreed with this conclusion. Program managers also stated that without the low floor, Transbus development for wheelchair access may be of no significance.

The manufacturers believed that the low-floor bus was feasible but maintained that they could not afford to undertake the tooling and start-up costs of a completely new bus without some form of Federal financial assistance. One of these manufacturers also believed that further component development was necessary on such items as brakes, rear axles, differentials, and tires. The third manufacturer and several transit bus operators believed that the problems experienced with the underfloor mechanical components were serious problems and required further development and testing before they could be considered adequate for production buses.

On July 27, 1976, UMTA announced its final Transbus policy.

--New transit buses to be purchased with UMTA financial assistance and advertised for bid after February 15, 1977, 1/ must have 8-inch

1/ On February 14, 1977, the Secretary of Transportation postponed the effective date of these requirements until May 27, 1977, and announced that the Department would hold a public hearing on March 15, 1977, to obtain advice with respect to advanced bus design and the Transbus program.
front step risers and floor heights of 24 inches or less after use of a kneeling device that lowers the bus floor height by 4 to 5 inches.

--The purposes of the Transbus program have been largely fulfilled by the mandate of a 24-inch floor height and the introduction of newly designed, more attractive, and more efficient buses in production in a competitive environment.

--It is neither feasible nor appropriate to mandate a transit bus floor height of 22 inches or less at this time.

The Administrator of UMTA gave several reasons for not mandating a 22-inch floor, including:

--The possibility that manufacturers would defer introducing advanced design buses for 3 to 5 years in order to develop tooling and production facilities for the lower 22-inch floor vehicles.

--Testimony from manufacturers and members of the public transit industry indicated that certain components on Transbus, such as axles, tires, and differentials, are still not proven or production ready.

--Increased capital and operating cost of the low-floor buses.

--The lack of financial capacity of at least two of the manufacturers who participated in the Transbus project to retool for low-floor bus production.

UMTA officials said that the Administrator's reasons for not mandating Transbus were based on his discussions with the three manufacturers, the public hearing testimony, the results of Transbus testing, and an impact analysis of Transbus costs and operations. These officials said that the deficiencies identified in the Transbus prototypes will not be corrected until someone makes a decision to buy Transbus and get it into commercial production where such deficiencies will be eliminated.
In commenting on Transbus before the American Public Transit Association in October 1976, the Associate Administrator for Technology, Development, and Deployment stated that:

"Transbus became highly controversial because it became a symbol and, in the eyes of many, synonymous with full transit accessibility for the elderly and handicapped. Yet to say that Transbus in its entirety was the only way to accommodate the needs of the elderly and handicapped is unquestionably an exaggeration. Nevertheless, it was this program which established a knowledge base and explored alternatives to meet the needs of the E and H [elderly and handicapped] as well as the general public."

The Transbus policy statement also pointed out that it "will remain an UMTA objective to continue to assist manufacturers to produce buses which are superior in a variety of respects, including having floor heights which do not exceed 22 inches." An UMTA official said that UMTA is committed to further research and development efforts in assisting manufacturers in producing superior low-floor buses. This official told us in January 1977 that there is presently no plan as to what research and development work will be conducted; however, in March 1977 UMTA plans to meet with the three manufacturers and discuss the possibility of standardizing such basic components of low-floor buses as transmissions, axles, and tires.

Representatives of elderly and handicapped persons believed that UMTA should have mandated Transbus and required wheelchair accessibility on all new buses and at least a portion of existing buses. They also believed that the technology is now available to manufacture Transbus and introduce it into revenue service, and that UMTA should reconsider its policy on Transbus.

UMTA approved another bus research and development project in September 1973 to develop specifications for an advanced small (not exceeding 35 feet) urban transit bus. The specifications for this bus will be similar to the performance specifications for Transbus, but specialized to reflect small bus requirements. In addition to developing specifications, the project is to identify the types of service small buses are providing or can provide, and determine desirable features to meet the transportation needs of elderly and handicapped persons, including persons confined
to wheelchairs. The project will also address ways to improve bus stops in general, and identify the problems these bus stops pose for elderly and handicapped persons.

In December 1976 an UMTA official told us that the small bus project is virtually complete, and that small bus specifications have been developed and are being made available to manufacturers. However, the use of these specifications will not be mandated by UMTA.

**Rail vehicle technology**

In June 1971 UMTA initiated its Advanced Concept Train Development Program to advance the state-of-the-art in rapid rail transit vehicle design and construction, and to demonstrate the operational benefits of such technology. The program has been planned in two phases. In January 1973 the first phase of the program was completed, resulting in a preliminary design and procurement of two vehicles built to that design. In January 1974 UMTA began the second phase to further design, develop, and test the vehicles. The vehicles offered the following design improvements for elderly and handicapped persons

--space for wheelchairs and storage racks for crutches;

--aisle width, seat spacing, and door openings to allow wheelchair mobility;

--audible and visual door-closing warning signals and public address systems;

--sensitive door edges; and

--stanchions and handles on backs of seats.

UMTA expects this program to be completed in June 1978.

In June 1971 UMTA also undertook its State-Of-The-Art Car Development Program to develop, test, and operationally demonstrate two rapid rail transit vehicles embodying the best available technology existing in 1971 and 1972.

UMTA officials informed us that no specific features were designed for these cars to address the transportation needs of elderly and handicapped persons because the existing 1971 and 1972 technology did not offer such design features and UMTA research and development management did
not consider such features to be a priority concern in developing the vehicles. However, the rail vehicles include such design features as 50-inch wide side doors and a public address system.

UMTA plans to complete this program by May 1977 after which a 2-year program will be undertaken to develop advanced subsystems which can be incorporated into new vehicle procurement and retrofitted into existing vehicles. However, UMTA does not plan to change the state-of-the-art car design to provide any other specific features that can be used more effectively by elderly and handicapped persons.

These two programs are planned to be technological inputs to UMTA's program to achieve rapid rail vehicle standardization. In April 1976 UMTA undertook a two-phase program to address rapid rail vehicle standardization. The first phase was a study completed in September 1976 which concluded that standardization was feasible and practical. The second phase, which UMTA expects to complete by April 1978, will produce performance requirements guidelines. According to an UMTA official, these will be used by industry and UMTA to achieve as much standardization as practical within the different operating environments of existing rapid rail transit systems.

UMTA officials said that the performance guidelines will incorporate vehicle improvements developed from both the advanced concept train and state-of-the-art car programs. These officials also said that the body and passenger compartment will have the improvements for elderly and handicapped persons developed in the advanced concept train program and will meet all the requirements of UMTA's regulations on transportation for elderly and handicapped persons.

New urban transit technology

In June 1969 UMTA approved a research project for the University of West Virginia at Morgantown to determine the feasibility of demonstrating a new mass transit technology for the University and the city of Morgantown. In June 1970 this project was completed and it was concluded that it would be feasible to demonstrate an automated transit system between the University and Morgantown. At approximately the same time, UMTA was developing a new concept of automated personal rapid transit and believed that
Morgantown was an excellent site for a national demonstration to evaluate the system as a practical solution applicable to many of the transportation problems that cities face.

According to the system specifications, the Morgantown stations had been planned to include elevators and ramps for elderly and handicapped persons, and the vehicles had been designed to carry one person in a wheelchair. A Morgantown official told us that currently the system is not accessible to handicapped persons, especially those in wheelchairs, and will not be until the elevators and ramps are installed, and that provisions, such as informational systems and safety devices, have not been made for the blind.

The UMTA project manager told us that the second phase of the project had been planned to expand the system and to complete aspects of the facilities undertaken in the first phase which were not essential to getting the system operational, such as the ramps and elevators. UMTA expects the second phase to be completed by July 1979. The UMTA project manager said that although special consideration has been given in the design of the vehicles and facilities for elderly and handicapped persons, no particular provisions have been made for blind persons because it was not considered a problem during early project development, and no changes are planned.

In April 1976 UMTA announced a project for the first public demonstration of fully automated people mover systems in urban downtown areas. The people mover projects are intended to show whether relatively simple automated systems can provide an economically viable solution to local circulation problems in congested downtown areas. UMTA believes that technology from its Morgantown personal rapid transit project may be incorporated into the downtown people mover systems.

According to UMTA's October 1976 draft plan for research and demonstration activities, the Morgantown project raised questions about future automated guideway transit research and demonstration projects as to how thoroughly the needs of elderly and handicapped persons will and should be considered, especially in regard to future downtown people mover projects.
Paratransit vehicle technology

In March 1975 UMTA undertook a project to design, build, and test two prototype vehicles which would accommodate persons confined to wheelchairs as well as the general public. Both vehicles have been equipped with a ramp and space for a wheelchair passenger in addition to three other passengers.

According to an UMTA official, the vehicles were to undergo mechanical and human testing starting in February 1977. According to this official, the program is expected to be completed in June 1977 at which time a final report and a set of mechanical drawings for each vehicle will be available to manufacturers and operators. However, UMTA does not plan to develop performance specifications for the vehicles as part of this project.

Conclusions

UMTA has considered the transportation needs of elderly and handicapped persons in its research and development projects. It appears that the Transbus project did achieve its objectives of developing a fully accessible urban mass transit bus design. UMTA's rationale for not following through with its intended mandate of a low-floor bus appears reasonable, given the impact such a mandate would have on the price and availability of large urban transit buses in the near future. However, UMTA should not permanently abandon the idea of mandating Transbus given its many positive features, including its lowest feasible floor height. We support UMTA's commitment to further research and development in assisting manufacturers in producing superior low-floor buses. We encourage UMTA to go forward with such research and development so that the fullest potential commercial use of such buses is obtained.

Although UMTA has considered the transportation needs of elderly and handicapped persons in the design of its Morgantown personal rapid transit project, the project has not yet provided service to handicapped persons. If UMTA uses this system as a model for future systems, it should assure itself that the transportation needs of all handicapped persons are not overlooked since their needs have not yet been met in the Morgantown project.

UMTA's research and development projects concerning rapid rail vehicles used in providing mass transportation
are not all addressing the special needs of elderly and handicapped persons. We support UMTA's plans to culminate these projects in the standardization of vehicle features that will meet special needs of elderly and handicapped persons.

We believe that UMTA must assure itself that all of its ongoing and planned research and development activities consider the appropriateness of addressing the transportation needs of elderly and handicapped persons.

**Recommendation**

The Secretary of Transportation should require the Administrator of UMTA to:

--See that, where appropriate, on-going and planned research and development projects fully address the transportation needs of all elderly and handicapped persons, especially those projects that are to be used as models for other projects.

**SPECIAL RESEARCH STUDIES**

From fiscal year 1971-74 UMTA approved five special studies, totaling about $1.6 million, to determine more accurately the population characteristics of elderly and handicapped persons, explore their needs and problems in using public mass transit equipment and facilities, and find solutions to such problems. As of October 1976 four of these studies had been completed and one was still in process and planned to be completed in September 1977.

UMTA officials told us that of the completed studies, two provided UMTA and localities with data on who the elderly and handicapped are, what their transportation needs and problems are, and two focused on the physical barriers these persons face in using public rapid transit systems and the types of vertical movement devices that could be developed to offer effective solutions to such barriers.

UMTA officials said they do not know the impact these special studies have had in assisting local transit operators and planners in planning and implementing transportation to meet the needs of elderly and handicapped persons. However, they believed such studies have been useful in
developing UMTA's regulations on transportation for elderly and handicapped persons and have provided UMTA with increased insight into the problems and needs of such persons in using public mass transportation, as well as ways to address such problems.

The handicapped and elderly market for urban mass transit

UMTA officials advised us that before 1972, very little data was available on persons who were elderly and handicapped in relation to public mass transit. In November 1972 UMTA approved a $137,000 grant to the Department of Transportation's Transportation Systems Center to conduct an analysis to determine the use and potential use of urban mass transportation by elderly and handicapped persons.

The Transportation Systems Center was to review all literature and research available on elderly and handicapped persons. UMTA believed that the results of this study would yield the best figures available of the market for mass transit by elderly and handicapped persons.

In July 1973 the Transportation Systems Center issued a study entitled "The Handicapped and Elderly Market for Urban Mass Transit." According to the study, it was impossible to determine the exact number of individuals with transit handicaps because comprehensive surveys had not been performed. It estimated that 13.4 million handicapped persons nationally experienced difficulties in using mass transit systems, as follows:

<table>
<thead>
<tr>
<th>Type of handicap</th>
<th>Elderly</th>
<th>Non-elderly</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visually impaired</td>
<td>1,430,000</td>
<td>540,000</td>
<td>1,970,000</td>
</tr>
<tr>
<td>Hearing impaired</td>
<td>160,000</td>
<td>190,000</td>
<td>350,000</td>
</tr>
<tr>
<td>Uses wheelchair</td>
<td>230,000</td>
<td>200,000</td>
<td>430,000</td>
</tr>
<tr>
<td>Uses walker</td>
<td>350,000</td>
<td>60,000</td>
<td>410,000</td>
</tr>
<tr>
<td>Uses other special aids</td>
<td>2,280,000</td>
<td>3,210,000</td>
<td>5,490,000</td>
</tr>
<tr>
<td>Other mobility limitations</td>
<td>1,510,000</td>
<td>1,800,000</td>
<td>3,310,000</td>
</tr>
<tr>
<td>Acute conditions (temporary)</td>
<td>100,000</td>
<td>370,000</td>
<td>470,000</td>
</tr>
<tr>
<td>Institutionalized</td>
<td>930,000</td>
<td>30,000</td>
<td>960,000</td>
</tr>
<tr>
<td>Total</td>
<td>6,990,000</td>
<td>6,400,000</td>
<td>13,390,000</td>
</tr>
</tbody>
</table>
The handicapped population is fairly evenly distributed geographically throughout an area. In addition to the almost 7 million persons who are both elderly and handicapped, there are about 13.1 million elderly persons who are not handicapped. Unlike the handicapped, the elderly population is very often concentrated in older neighborhoods of cities. The study estimated that the urban mass transit market is about 7.6 million elderly and handicapped persons.

The study also estimated it would cost about $990 million to make existing and planned public transit systems fully accessible to all people. Buses would be equipped with ramps or hydraulic lifts, more stanchions, wider doors, and more handrails. Elevators or escalators would be installed in rapid rail stations.

The improvements might attract some handicapped persons who live within two blocks of public transit but who cannot use it due to current physical barriers. In addition, the improvements would also benefit elderly and handicapped persons currently using the systems with difficulty.

Another approach mentioned in the study was expanding existing service by adding both demand-responsive service and broader coverage. About 4.2 million elderly and handicapped persons would gain access to transit systems if about 10 percent of the demand-responsive and fixed-route fleets were equipped with special hardware to meet these needs. Operating and amortized capital costs for this approach would be about $2.2 billion per year. However, it cannot be determined from available data how many elderly and handicapped persons would use urban mass transportation if it were made accessible to them under either of these approaches.

UMTA officials informed us that although the Transportation Systems Center study provided the best data available on the numbers of elderly and handicapped persons, it only provided gross estimates.
Handicapped and elderly vertical movement assessment study

In January 1974 UMTA initiated a program to develop devices or aids to eliminate barriers in rapid transit systems to allow better use by elderly and handicapped persons. The work was performed by the Transportation Systems Center under a $50,000 UMTA grant.

The Center's study entitled "Handicapped and Elderly Vertical Movement Assessment Study" was issued in May 1976. The report discusses the selection and assessment of various types of vertical movement devices for use by elderly and handicapped persons in older fixed-rail transit facilities. The goal of the study was to identify the most limiting obstructions to urban mass transportation access for elderly and handicapped persons.

A Transportation Systems Center official told us the study concentrated on Boston's rapid transit system, and only considered accessibility to stations and not to transit vehicles. The underlying objective of the project was to develop and evaluate a stair-climbing wheelchair; however, it evolved into an assessment study of existing methods of vertical movement. According to this official, the report offered no solutions for the transportation problems of the elderly and handicapped. An UMTA official told us that although the study had provided a fairly good assessment of vertical movement methods, it had provided little assistance to UMTA in determining how to provide access to rapid transit systems.

A study on making transportation facilities accessible to handicapped and elderly persons

In June 1974 UMTA approved another study for approximately $46,000 to (1) examine and categorize all physical barriers in the Nation's transit system, (2) identify and classify the varying degrees of handicapped persons, (3) analyze alternative solutions to physical barriers, and (4) develop specific actions to identify requirements for
The project emphasized solutions to the problem of vertical circulation for elderly and handicapped persons because it represented the most difficult obstacle to overcome in making transit systems accessible.

Overall, the study concluded that the most difficult barrier to remove for the elderly and handicapped in renovating and designing rapid rail stations is vertical level change between floors. The study stated that a number of alternatives to the conventional elevator exist, including wheelchair elevators, inclined stairway chair lifts, and stair-climbing wheelchairs.

An UMTA official informed us that this study was satisfactory because it provided UMTA with technical detail on the problems of vertical circulation as well as guideline specifications for making mass transit systems more accessible to elderly and handicapped persons.

In December 1974 the original grant was amended to identify and evaluate all available equipment and to develop a directory of those manufacturers who offer transit vehicles that have been modified to accommodate elderly and handicapped persons. According to an UMTA official, this directory was intended to be a guide to individuals responsible for purchasing such equipment. This official said that the directory has been made available to potential purchasers.

Transportation for the elderly and handicapped

In June 1971 UMTA awarded a grant for approximately $227,000 to determine the characteristics of transit usage by elderly and handicapped persons and the major constraints they have in using mass transit systems. The study results were to assist Federal, State, and local transportation officials in improving transportation services for the elderly and handicapped.

In 1973 a final report was issued on this study entitled "Transportation for the Elderly and Handicapped." The report presented detailed findings according to responses from 867 elderly and 217 handicapped persons in four cities (Albany, New York; Knoxville, Tennessee; Sacramento, California; and South Bend, Indiana).
The report presented several conclusions, including:

--Elderly and handicapped persons have physical limitations that either prevent or make the use of public transit difficult and often they must rely on public transit for basic needs (e.g., shopping and health care).

--Average transportation costs are higher for handicapped persons than elderly because fewer handicapped persons can use the service. (The transportation cost for both groups ranges between $1 to $7 per week.)

An UMTA official said that the study was based on a limited sample of elderly and handicapped respondents and has not been considered useful nationwide to assist various urban areas because the findings cannot be projected over the entire elderly and handicapped population. However, this official believed that the study has provided UMTA with useful data on the problems elderly and handicapped persons had in using public transit in these four cities, including access to public transit, getting to the bus stop, and paying for public transit.

Transportation problems of handicapped persons

In June 1974 UMTA approved a fifth special study for approximately $1 million to determine the transportation problems of handicapped persons. The overall objective of this project was to determine the travel requirements of handicapped persons and to develop cost-effective transportation service alternatives using all modes of transportation.

This study was planned in two phases. The first phase was completed in August 1976 and provided information on transportation for handicapped persons, including

--an estimate of the number of handicapped persons on the basis of existing data, review of available studies that estimated the handicapped population, and recommended procedures to make such estimates;

--the roles of Government and the private sector in providing transportation for handicapped persons;
--alternative planning methods to meet the transportation needs of the handicapped; and

--hypothetical transportation solutions for handicapped persons through public transit, alternative special services, and private transportation.

In March 1976 UMTA undertook the second phase of this study which is to include a

--national survey to determine more accurately the size of the handicapped population and its travel requirements;

--cost-benefit analysis for meeting handicapped transportation needs in large-, small-, and medium-sized urban areas;

--demonstration to evaluate proposed solutions that will result in actual site specific demonstrations of specialized service, fixed-route or a combination thereof, for handicapped persons in large-, small-, and medium-sized urban areas; and

--description of a national program for improving mobility for the handicapped and an estimate of the cost of providing such mobility.

UMTA officials told us that this study will be completed in September 1977, and is considered by UMTA to be the most important study on the handicapped to date because it will generate original source data on the transportation problems and needs of handicapped persons. These officials told us that this data will be developed on the basis of a comprehensive survey that was initiated in November 1976 of between 12,000 and 14,000 households, including interviews with approximately 3,500 handicapped people. The Director of the Office of Service and Methods Demonstrations told us that based on information developed from the study, different operating demonstrations will be designed to eventually test the most promising approaches to meeting the transportation needs of elderly and handicapped persons. According to this official, once this study is completed UMTA will begin planning actual demonstrations of the study's recommended approaches in different sized urban areas; however, at
present only one demonstration is planned in fiscal year 1978. This official told us that until the study is complete, UMTA will not be able to offer any details on the type, size, and location of the proposed demonstration.

Some representatives of the elderly and handicapped expressed concern that UMTA has been overstudying the needs and problems of elderly and handicapped persons and that this study will not be useful to localities because it is national in scope. An UMTA official said that localities will be able to use data provided from this study but that they will have to extrapolate to get estimates.

**Use made of special research studies**

UMTA relies primarily on the issuance of grantee reports through a Government contract information service (discussed on p. 61) to foster the use of special research studies by other local officials responsible for the transportation needs of elderly and handicapped persons. Assessing whether these studies provide useful information to these officials requires knowledge about how they have been used.

UMTA officials told us that they do not know the impact the completed special studies have had on the planning and implementation of improved transportation for elderly and handicapped persons because they do not receive adequate feedback from users of the studies, and they do not adequately follow up on the use of such studies.

**Conclusions**

UMTA has considered the special needs of elderly and handicapped persons in funding special research studies. Although UMTA believes that such studies have been useful in understanding the problems and needs of elderly and handicapped persons and provided useful input to its regulations pertaining to transportation for such persons, UMTA does not know whether and to what extent these studies have assisted local transit operators and planners. Without such information, UMTA cannot measure the usefulness of such efforts and the appropriateness of funding such projects in the future.

**Recommendation**

The Secretary of Transportation should require the Administrator of UMTA to:
--Adopt a requirement to determine whether and to what extent each special research study has assisted localities in planning and implementing improved public mass transportation that elderly and handicapped persons can use effectively, and consider this information when deciding the appropriateness of undertaking other similar projects.

**SERVICE AND METHODS DEMONSTRATIONS**

The Service and Methods Demonstration Program is intended to develop new techniques and concepts for using existing transit equipment in providing significantly improved quality and quantity of public transportation. The primary focus of this program is to develop and demonstrate these techniques and bring them into operational application.

Providing improved mobility for the transit dependent, which includes persons who are elderly and handicapped, is a primary objective of the program. In meeting this objective, UMTA has demonstrated a variety of different transit service approaches, including specialized service, user subsidies, and local social services coordination. A major goal in demonstrating these different approaches at selected locations is to provide a model for widespread adoption in numerous urban areas.

**Demonstration project results and their impact on the transportation needs of elderly and handicapped persons**

From fiscal year 1971 through September 30, 1976, UMTA approved 19 demonstration projects, totaling about $10.6 million, which addressed the transportation needs of elderly and handicapped persons. According to UMTA officials, 15 of these projects, totaling about $6.3 million, were funded exclusively to address the transportation needs of elderly and handicapped persons. Two of these projects were funded to develop future specialized demonstrations and two other projects were used to test different experimental service concepts--user subsidies and use of a transportation broker.

Under the user subsidy project, subsidy funds were provided directly to elderly and handicapped persons who were able to purchase transportation service at a reduced cost. The transportation provider was reimbursed at full value from the local agency administering the program.

The community broker project tested the concept of using a broker to act as a middleman between such persons.
and transportation providers. By grouping elderly and handicapped riders, the broker tries to make arrangements with providers for reduced rates for groups traveling to shopping, health, and recreational activities at prearranged times.

In the 11 remaining projects, UMTA tested different types of specialized demand-responsive service approaches to meeting the transportation needs of elderly and handicapped persons.

According to UMTA's 1975 Service and Methods Demonstrations Program Annual Report, specialized demand-responsive service provides door-to-door service on demand, such as dial-a-ride or shared taxi. A variety of vehicles, including buses and vans, have been used in these demonstrations. According to UMTA officials, each of these demonstrations was unique in terms of its area population and size, transit service area, potential eligible ridership, and vehicle fleet size.

As of October 1976 seven of the exclusive demand-responsive demonstrations were completed and four were still ongoing. UMTA officials told us that all of the completed demonstrations have been considered successful and met their overall objectives of demonstrating specialized service for elderly and handicapped persons to improve their mobility. According to these officials, the success of these demonstration projects has been measured in various ways, including whether they have met specific project objectives, the number of elderly and handicapped persons who registered for the service, the passenger demand for such service, and the degree to which UMTA can apply knowledge from the demonstration to other projects.

We reviewed available reports on six of the completed demonstration projects which were conducted in the following cities:

--Cranston, Rhode Island.
--St. Petersburg, Florida.
--Baton Rouge, Louisiana.
--Klamath Falls, Oregon.
--Syracuse, New York.
--Lincoln, Nebraska.
We found that these projects generally had met their project objectives and had provided a necessary transit service which had a positive community impact. An official told us that five of these projects are continuing to offer transit service for elderly and handicapped persons and are being funded by local communities. This official told us that although UMTA encourages localities to continue the service past the demonstration period, this matter is left entirely up to the localities. The sixth project--Klamath Falls, Oregon--did not continue beyond the demonstration due to lack of local financial capability. However, according to an Oregon State official, the project has had influence in establishing a small bus service in another area within the State. This official said that experience with operating the demonstration was shared with the other area.

Although UMTA's demonstration projects have had a local impact in providing specialized transportation service for elderly and handicapped persons, not all of the projects have adequately explored the reasons why people did not participate in the demonstration. For example, in Baton Rouge, Louisiana, there were no reasons cited in the final report as to why only about 7 percent of the eligible elderly and handicapped population registered for the service as of March 1975 and only 2 percent actually used the service. According to a Baton Rouge official, no specific effort was made to determine why so few people registered; however, a limited number of discussions held with elderly and handicapped persons indicated that many of them had alternate means of transportation and did not need the service. This official said this is more of an assumption than fact because a comprehensive survey was not conducted. In addition, in Cranston, Rhode Island, only about 7 percent of the elderly and handicapped population ever used the service. There were no reasons cited in the final report for such low participation. However, according to a Cranston official, although the use of three vehicles could not always keep pace with demand resulting in many eligible persons unable to use the service, no actions were taken to determine the number of people who still would not use the service if it were not saturated. This official agreed that it is important that demonstration projects explain in more detail why people did not ride the service, because such information would be useful not only to other communities, but also during the demonstration in undertaking changes these people believe should be made to make the service more effective.

In contrast the St. Petersburg project offered some reasons as to why only 16,000 elderly and handicapped
residents out of a potential market of 37,000 registered for use of the system. However, a St. Petersburg official said that people were reluctant to use the service, or use it more frequently because they:

--Were doubtful about the life span of the system.

--Did not fully understand the principles of dial-a-ride transportation.

--Were not completely willing to change their personal habits so they could take advantage of the service.

--Lacked personal confidence and security when traveling in a broader environment.

This official told us that these reasons were obtained on the basis of limited telephone interviews and discussions with local elderly and handicapped passengers on buses.

In the Klamath Falls, Oregon, project there was no data available as to how many of the 36,000 eligible people in the service area had used the service, making it impossible to compare the number of persons who participated in the demonstration against the eligible population. Without such a comparison, it is not possible to fully measure the degree of community participation. An Oregon State official said there did not appear to be a need to determine this type of information when the project was ongoing and, therefore, it was excluded.

No comprehensive surveys were performed in any of these projects to obtain reasons why eligible elderly and handicapped persons did not use the service.

UMTA officials believe that to accurately determine why elderly and handicapped persons did not participate in demonstrations would require the use of a comprehensive survey. A Transportation Systems Center official told us that a valid survey to determine these nonuser needs would cost between $50,000 to $100,000 to develop and administer.

Once a demonstration project has been completed, a final report is submitted by the grantee to UMTA which is to explain in detail the nature and objectives of the project, methodology, findings, and demonstration results.

We found that the demonstration projects' final reports each emphasized various types of data; some offered
considerably more detail than others, making it difficult to compare data from one demonstration project with that of another. For example, the Cranston, Rhode Island, project offered very little detailed data in such areas as service, ridership, and costs, while the St. Petersburg project offered considerable detail in these and other areas.

Cranston and St. Petersburg officials believed that inconsistency between projects has been caused primarily by the lack of more specific guidance from UMTA in terms of what standard data should have been collected to make the projects more consistent. They believed that UMTA should standardize certain types of data that must be collected in any demonstration project, such as details on costs, ridership, service offered, and nonusers' attitudes on the demonstration.

According to UMTA officials, although grantees have complied with UMTA's procedures in submitting final reports, many of these reports have not been useful in making comparisons between different demonstration projects due to their lack of consistency. An UMTA official told us that UMTA has been aware of this problem, and that grantees did not have to meet any specific requirements for the type of data to be collected, how it should be analyzed, and the demonstration results reported.

As a result, in January 1975 UMTA entered into an agreement with the Department of Transportation's Transportation Systems Center. The Transportation Systems Center is to assist UMTA in planning, implementing, and evaluating the demonstration program, conducting analytical studies, preparing reports, and disseminating information. According to an April 1976 agreement, the Transportation Systems Center is primarily responsible for coordinating a contractor team which is to perform demonstration evaluations to insure the objectivity and consistency of data between demonstrations, so that results can be compared more effectively.

In February 1976 the Transportation Systems Center published evaluation guidelines to assist contractors and grantees in planning, implementing, and reporting the findings of each demonstration. The guidelines outlined such areas as background on the evaluation process, evaluation plan formats, and guidelines for planning and implementing evaluations procedures. According to a Transportation Systems Center official, the use of these
guidelines will be encouraged but not required because each demonstration site is unique and will require a specific evaluation plan. This official said that the guidelines will be modified and updated periodically to reflect new evaluation techniques.

In order for demonstration projects to have an impact as service models in other urban areas, the techniques demonstrated and the results of the project must be distributed widely. To facilitate this transferability of various demonstrated methods, UMTA places emphasis on evaluating and disseminating the results of its efforts. UMTA's primary mechanism for dissemination is issuing a limited number of grantee final reports to a contracted Federal Government information service which is a central source for the public sale of Government-sponsored reports.

According to UMTA officials, reports available through this information service are listed on monthly abstracts that UMTA sends to approximately 3,000 organizations, including transit authorities, State transportation departments, and local metropolitan planning organizations. These officials told us that due to the limited number of such reports available at UMTA, it is not possible to send every interested transit operator a copy of each report. However, on a limited basis, reports are sent to individual transit operators on request or when UMTA believes they would be interested in a particular report. These officials also disseminate information on the results of demonstration projects while participating in conferences relative to service and methods demonstration activities.

UMTA officials believe that several urban areas have received these reports and that ongoing and completed demonstrations have had an impact on different localities because UMTA has received inquiries about specific demonstrations that may be applicable in particular locations. However, UMTA cannot quantify such an impact because it does not document inquiries. According to an UMTA official, it would be difficult to determine the impact of these demonstration efforts without conducting visits to demonstration sites to determine which other urban areas have expressed interest in the demonstration and how useful it has been in influencing those areas in planning and implementing actual service for elderly and handicapped persons. However, UMTA officials agreed that determining the impact of its demonstration projects is important and would help UMTA to measure its program effectiveness.
The results of UMTA's demonstration projects and activities can also be useful to other UMTA offices in offering grantees additional technical assistance. According to the Director of the Office of Service and Methods Demonstrations, an attempt is made to communicate demonstration activities to other UMTA offices through occasional staff briefings, its 1975 services and methods demonstration annual report, and its program plan for research and demonstration activities (as discussed on pp. 63 and 64).

Although communication did exist between UMTA offices, some UMTA transit assistance representatives who were responsible for approving capital grants said that they were not always informed about ongoing or planned service and methods demonstration activities pertaining to the elderly and handicapped, and that grantee reports and other technical input would provide them with increased knowledge about concepts and techniques which have been proven useful. Such knowledge would enable them to offer more technical advice to potential grantees on ways to meet the special needs of elderly and handicapped persons. These officials also believed that they might offer service and methods demonstration staff technical advice on possibly improving current and planned demonstration activities.

Conclusions

Although UMTA has funded various demonstration projects that have had a local impact in providing specialized transportation services for elderly and handicapped persons, it has not determined how useful these projects have been to other local transit operators and planners and city officials in planning to meet the transportation needs of elderly and handicapped persons. Without knowing the use made of these projects, UMTA has not assured itself that such projects are effective as models for other areas in planning to meet the transportation needs of elderly and handicapped persons.

In addition, not all UMTA's demonstration projects have adequately addressed the reasons why eligible elderly and handicapped persons did not participate in the demonstrations. Without knowing this, UMTA is not assured of getting the fullest potential value of each demonstration. For example, this type of information could offer UMTA and grantees additional insight on whether particular demonstration techniques are effective and the types of service improvements that should be made to more effectively meet the needs of the community.
Also, demonstration project final reports are generally inconsistent in terms of data presented, which makes comparisons between different project results difficult. UMTA is attempting to improve the consistency of its projects and has developed evaluation guidelines.

Although the Office of Service and Methods Demonstrations provides information to transit assistance representatives on the results of its various demonstration activities, reports, and staff briefings, some transit assistance representatives said they did not always receive this type of information which would help them advise potential grantees on ways to meet the transportation needs of elderly and handicapped persons.

Recommendations

We recommend that the Secretary of Transportation require the Administrator of UMTA to:

---Adopt a requirement to determine whether demonstration projects have contributed to planning and implementing improved local public mass transportation that can be effectively used by elderly and handicapped persons, and if appropriate, direct future projects toward increasing this contribution.

---Establish procedures to see that the results of UMTA's demonstration program activities are systematically made available to other UMTA offices. These procedures should consider a mechanism to improve communication with transit assistance representatives which could result in greater benefits to potential grantees in developing and implementing their plans for meeting the transportation needs of elderly and handicapped persons.

---Require future demonstration projects to thoroughly address and report on the reasons why people do not use the demonstration service.

UMTA'S PLANS FOR ADDRESSING THE TRANSPORTATION NEEDS OF ELDERLY AND HANDICAPPED PERSONS

On June 30, 1976, in a memo to the Associate Administrator for Transportation Management and Demonstrations, the UMTA
Administrator expressed concern that UMTA was funding a large amount of research and demonstration projects on the elderly and handicapped that were not being coordinated between UMTA offices. As a result, the Administrator made the Associate Administrator for Transportation Management and Demonstrations responsible for developing a plan to provide for elderly and handicapped persons in its research and development and demonstration activities. An UMTA official said in November 1976 that UMTA was still formulating such a plan. This official told us that the plan should:

--Consolidate all of the existing and proposed research and development and demonstration activities to achieve coordination.

--Recommend future research and development and demonstration projects.

--Provide the Administrator of UMTA with information on whether the existing and proposed research and development and demonstration activities are sufficient and whether more should be done.
CHAPTER 5

CONTROVERSY ABOUT HOW TO PROVIDE FOR
THE TRANSPORTATION NEEDS OF ELDERLY
AND HANDICAPPED PERSONS

UMTA has interpreted section 16(a) of the act to mean that special efforts must be made to provide all elderly and handicapped persons mass transportation services which they can effectively use; however, all transportation equipment purchased with UMTA grant funds does not have to be accessible to persons confined to wheelchairs. UMTA believes that it is appropriate to make grants to urban areas for mass transit equipment which is not fully accessible if specialized transportation is provided for persons whose mobility limitations prevent them from effectively using regular public transportation.

Representatives of handicapped persons, for the most part, and some representatives of elderly persons believed that section 16(a) of the act means that all urban mass transportation equipment and facilities should be fully accessible to all persons, including those who are confined to wheelchairs. They believe that UMTA should not grant Federal funds to urban areas for mass transit equipment and facilities which are not fully accessible by all elderly and handicapped persons. These opposing interpretations of the law have drawn UMTA into several lawsuits.

Furthermore, the 94th Congress had considered additional legislation on urban mass transportation in which the House Subcommittee on Surface Transportation had proposed requiring that all fixed facilities and vehicles to be used by the general public for mass transportation purposes be accessible by elderly and handicapped persons, including those confined to wheelchairs.

OPPOSING INTERPRETATIONS OF THE LAW

UMTA interprets section 16(a) of the act to mean that:

--All mass transportation equipment purchased with UMTA grant funds does not have to be accessible by persons confined to wheelchairs.
--Special efforts are to be made to provide all handicapped persons mass transportation services which they can effectively use.

--UMTA is responsible for determining appropriate methods for implementing the law.

UMTA's interpretation is consistent with its policy of having local officials decide the type and degree of mass transportation they will provide. UMTA allows local officials to provide separate special transportation for elderly and handicapped persons rather than make their regular transit systems fully accessible. UMTA requires, however, that some manner of transportation be provided for elderly and handicapped persons. According to its interpretation of section 16(a), UMTA believes it is carrying out its mandate to insure that the transportation needs of elderly and handicapped persons are met by issuing regulations, conducting research and demonstration projects, sponsoring special studies and transportation planning, and funding capital projects, which pertain to the transportation needs of elderly and handicapped persons.

The urban mass transit industry generally agreed with UMTA's interpretation, although some transit operators believed that mass transportation should be accessible by persons confined to wheelchairs. Representatives, mainly of organizations of handicapped persons and some of organizations of elderly persons, advocated urban mass transportation fully accessible to persons in wheelchairs. They interpreted section 16(a) to mean that all transit equipment and facilities purchased with UMTA grant assistance are to be accessible by every handicapped person.

Advocates of full accessibility believed that providing transportation with only a separate, specialized system is generally unresponsive to the needs of elderly and handicapped persons, especially handicapped persons, and results in

--segregating them from the mainstream of society,

--providing them a level of service inferior to that provided to able-bodied persons, and

--generating unnecessary expenses and inefficiencies due to overlapping routes and duplicating services of the regular transit system.
On the other hand, some representatives of elderly groups favored separate specialized service. They said that elderly persons fear overcrowding on public transportation because of opportunities for theft, mugging, and bodily injuries, and some believe that elderly persons do not have the same psychological needs as the handicapped who want to be integrated into the mainstream of society.

UMTA INVOLVEMENT IN LAWSUITS CONCERNING TRANSPORTATION FOR ELDERLY AND HANDICAPPED PERSONS

As of December 1976, UMTA has been involved in 15 lawsuits concerning accessible transportation for elderly and handicapped persons. In 14 of these cases the transportation authorities or mass transit operators in urban areas were being sued because they were providing regular mass transit services with equipment and facilities procured with UMTA capital grant assistance which were not fully accessible to persons who could not climb steps. Of these 14 cases, UMTA has been involved in 10 as a named defendant because it provided the funds for the equipment and facilities which were not fully accessible. In the other four cases UMTA has participated as amicus curiae (friend of the court).

UMTA believes that it should attempt to control and add consistency to courts' interpretations of the laws it must implement, and to develop its legal arguments in these cases mainly to support that interpretation. If any of these cases were decided in a manner contradictory to its interpretation, UMTA believes its implementation of the law would be more complicated and probably not consistent throughout the Nation because various courts could decide differently.

The plaintiffs in these 14 cases claimed that mass transportation provided with Federal financial assistance must be fully accessible for all persons, including those who cannot negotiate steps, and that UMTA is legally responsible for insuring that Federal funds are used only for procuring mass transportation equipment and facilities that are fully accessible. In these lawsuits the plaintiffs sought injunctions against procuring or placing in service mass transit equipment and facilities which were not fully accessible.

UMTA developed the following arguments for not providing fully accessible mass transportation in its amicus curiae and defense briefs in answer to the plaintiff's claims. UMTA believed that the present state of bus technology did not
allow mandating fully accessible regular urban mass transportation systems for the following reasons:

--- No U.S. manufacturer produced a standard size transit bus designed and equipped for use by persons confined to wheelchairs.

--- Although several types of small buses existed that were designed and equipped for use by persons confined to wheelchairs, they had not been demonstrated and tested in regular urban mass transportation services, and they were exclusively for use in light-duty operations.

--- UMTA has developed prototypes of the new buses for use in regular mass transportation service which can accommodate persons confined to wheelchairs and which have been demonstrated and tested in regular urban transportation service. However, these new generation buses were not commercially available.

--- If the law was interpreted to mandate instantaneous universal wheelchair accessibility for all urban mass transportation equipment, it would bring all new bus procurement to a halt while wheelchair-accessible equipment was developed to the point where it could be commercially produced. Such action would harm the general public while not benefiting persons confined to wheelchairs.

In its briefs UMTA stated that it has undertaken the following actions to insure that transportation is provided to elderly and handicapped persons that they can effectively use:

--- UMTA funds capital projects in urban areas for specialized equipment to provide transportation to elderly and handicapped persons which they can effectively use.

--- For urban areas to be eligible to receive operating assistance funds, UMTA requires that they implement a program of half-fares during off-peak hours for elderly and handicapped persons.

--- UMTA undertakes technical studies projects and research, development, and demonstration projects
to determine the mass transportation needs of elderly and handicapped persons, and to develop and demonstrate mass transit facilities, equipment, and operating techniques to meet these needs.

--UMTA has developed regulations on transportation for elderly and handicapped persons which establish planning requirements, service requirements, and equipment standards, and gives examples of acceptable levels of special efforts required of grantees to improve services to wheelchair users and semiantibulatory persons.

UMTA generally has been successful in its efforts to influence courts' decisions. As of December 1976 the courts' decisions have supported UMTA's interpretation of section 16(a) of the act in 10 of the 14 lawsuits. Of the other four cases, two are pending in the courts; in the third, the court temporarily awarded the injunction sought by the plaintiff until the court decides on UMTA's motion for summary judgment; 1/ and the fourth--the case in Baltimore--was settled before the court ruled when UMTA agreed to issue regulations on transportation for elderly and handicapped persons.

In only 2 of the 10 cases have decisions become final. These were decided against the plaintiffs and were not appealed. Of the remaining eight cases, four have been decided against the plaintiffs and have been appealed but not heard; and in four cases the courts have ruled against the plaintiffs' motions for injunction but have not ruled on UMTA's motions for summary judgment.

The 15th case is one in which a nationwide coalition of disabled and elderly organizations and persons have directly sued the Secretary of Transportation, the Administrator of UMTA, and the Administrator of the Federal Highway Administration. This is a class action to compel the defendants to require that Federal financial assistance for urban mass transportation be used only to purchase specific low-floor, wide-door ramped buses and otherwise to assure

1/ Summary judgment under Federal rules of civil procedure is a procedure under which a case can be resolved without going to trial because there are no material issues of fact and the only questions remaining are questions of law.
the availability of public transportation which elderly and handicapped persons can effectively use. The plaintiffs claimed that present bus technology does allow UMTA to mandate fully accessible urban mass transportation systems, and challenged the validity of UMTA's regulations on transportation for elderly and handicapped persons and its Transbus decisions.

UMTA believed that if the court should grant judgment in favor of the plaintiffs in this case, production of regular route urban transit buses would be halted in the United States until a production model of the low-floor, wide-door ramped Transbus could be developed from a prototype. Even under a crash program this could take 2 years.

UMTA filed a motion for dismissal or summary judgment which was scheduled to be heard early in 1977.

PROPOSED LEGISLATION CONCERNING TRANSPORTATION FOR ELDERLY AND HANDICAPPED PERSONS

The 94th Congress proposed legislation to further amend the Urban Mass Transportation Act of 1964 to expand the provisions for mass transportation assistance to meet the needs of elderly and handicapped persons.

In February 1975 companion bills were introduced in the House of Representatives (H.R. 3155) and in the Senate (S. 662). In September 1975, S. 662 passed the Senate and was referred to the House Subcommittee on Surface Transportation of the Committee on Public Works and Transportation, which was considering H.R. 3155. Both bills contained similar requirements, which were more specific than the act is now, to insure that urban mass transportation would be accessible by elderly and handicapped persons. They required all new rapid rail systems facilities and vehicles and any vehicles integrated with such a system to be accessible by elderly and handicapped persons. They also required new buses and other step-entry vehicles to be accessible by elderly and handicapped persons if the availability of accessible vehicles and the proposed use of the vehicles permitted. If such vehicles were not fully accessible, equivalent alternative transit services were required to be provided for elderly and handicapped persons.

The Subcommittee held hearings on this proposed legislation in June 1976; H.R. 3155 was amended on July 20, 1976, and sent to the full committee. However, it was not voted out of the full committee to the floor of the House.
H.R. 3155, as voted out of the Subcommittee, would have defined handicapped persons as those who are nonambulatory or wheelchairbound and, for the first time, defined elderly persons as those who are 60 years of age or older. H.R. 3155 would have required that every new vehicle manufactured and station, building, and facility constructed for use by the general public for mass transportation purposes be accessible to elderly and handicapped persons.

FACTORS TO CONSIDER IN PROVIDING FULL ACCESSIBILITY

Although UMTA has encouraged and has been willing to provide funds for the development of separate special transit services for elderly and handicapped persons, it has not encouraged the development of capital projects that would provide full accessibility for severely handicapped persons, including those confined to wheelchairs, on standard transit systems. UMTA believes it has been more economical and safer to provide specialized transportation for the severely handicapped. UMTA's position on full accessibility has been viewed by advocates of full accessibility as resistance to providing mass transportation that elderly and handicapped persons can use effectively.

We believe that a number of factors need to be considered in resolving this issue, such as

--the transportation needs of elderly and handicapped persons;

--the cost of making regular transit systems fully accessible;

--the extent elderly and handicapped persons would use fully accessible regular transit services; and

--the effect that fully accessible transit services would have on other transit users.

However, information about these factors is generally insufficient to support a decision to provide or not to provide fully accessible transportation. Most of the urban areas included in our review lacked data on who the elderly and handicapped were, where they lived, and what their transportation needs were.

UMTA has undertaken studies to determine the number of elderly and handicapped persons nationally and the general
problems that make urban mass transportation difficult or impossible for them to use. While these studies have provided much needed information about the general transportation problems of elderly and handicapped persons, they have not generated the information needed to determine how to best solve these problems. As discussed in chapter 4, UMTA has undertaken another more comprehensive study to determine the transit needs of elderly and handicapped persons and to evaluate the cost and benefits of transportation to meet these needs by means of separate specialized services, fully accessible regular transit services, and combinations of these methods. This study is planned to culminate in various demonstration projects beginning in 1978.

UMTA has also planned to undertake a program to monitor certain accessible bus systems being developed under capital grants beginning in fiscal year 1977. UMTA's plans appear to be comprehensive and should address the factors that we believe are necessary to consider in developing sufficient information for deciding whether fully accessible urban mass transit is an economical and safe means of providing for the transit needs of elderly and handicapped persons. However, of the four bus systems to be included in this program, monitoring is planned to begin in only one system in fiscal year 1977. That system will have a limited number of accessible buses. Only one of the bus systems included in this program will have all of its buses fully accessible, but dates to begin monitoring this and the other two systems in the program were indefinite at the time of our review. UMTA also planned to develop another bus system with all the buses wheelchair accessible in a small urban area yet to be selected.

Some other studies have estimated the cost of fully accessible regular transit services, but have not been able to determine how much elderly and handicapped persons would use such systems. For example, the Department of Transportation's Transportation Systems Center, in a study prepared for UMTA (see ch. 4), reported that to make public transit in urban areas of over 50,000 population fully accessible to all people, including elderly and handicapped persons who live within two blocks of public transit, would cost about $990 million. However, the study noted that from available data, it cannot be determined how many elderly and handicapped persons would use fully accessible regular transit services.

Also in Boston a consultant studying means by which the MBTA can provide transit services to meet the needs of elderly and handicapped persons has estimated that it would cost $60 million to make all of the MBTA's services fully
accessible. However, MBTA officials cannot predict how much persons confined to wheelchairs would use these services. Before this consultant's study, the MBTA had not made any special studies regarding elderly and handicapped persons, and had relied on the 1970 census to estimate the number of elderly and handicapped persons in its service area.

An official of the MBTA believed that most of the needs of elderly and handicapped persons could be met with less expensive means, such as buses equipped with a "kneeling device" which the MBTA uses on many of its buses and which only adds about $200 to the cost of a bus. These buses are helpful to elderly and less severely handicapped persons. This official also believed that severely handicapped persons will continue to desire and need specialized transit services.

In California State transportation officials told us that adequate cost data did not exist to make valid comparisons between fully accessible regular transit services and separate specialized transit services. However, one of these officials estimated that full accessibility of all California's mass transit services would cost approximately $100 million, but the demand by elderly and handicapped persons of fully accessible regular transit services cannot be determined. A California State demographic analyst told us that the best available data on California's elderly and handicapped population has been the 1970 census from which various estimates are made.

During our review we noted that transit operators in at least two urban areas--Los Angeles and Santa Clara, California--are committed to providing fully accessible regular route bus services. In Los Angeles, the Southern California Rapid Transit District, which operates a fleet of approximately 2,000 buses, has UMTA approval to purchase 200 new buses equipped with wheelchair-accessible devices. These wheelchair-accessible buses will cost $1.6 million more than the same buses without wheelchair accessibility. However, the District cannot reliably predict how much persons confined to wheelchairs will use this service.

UMTA is also concerned about not knowing how fully accessible urban mass transportation would affect maintaining schedules and the ridership of able-bodied passengers. Some public transit operators believed that public transit made fully accessible with vehicles equipped with wheelchair lifts would slow operating schedules and have an adverse affect on the ridership of able-bodied passengers.
In our opinion, this lack of data on how much persons confined to wheelchairs would use fully accessible public transit and on the effect fully accessible public transit would have on operating schedules and ridership in general are problems that every transit operator faces. We believe that one means of resolving these matters is to obtain some valid data based on experience by developing fully accessible transit services in selected urban areas, particularly those areas which have expressed a willingness to provide fully accessible regular transit services.

CONCLUSIONS

We have not taken a position on either side of the controversy over UMTA's interpretation of its statutory mandate to assure usable urban mass transportation for elderly and handicapped persons because the matter is pending in the courts. However, we believe that UMTA's legal actions to influence courts' interpretations of its statute and to participate in such cases as amicus curiae when it is not a named defendant are proper actions because it has statutory authority to provide leadership in transportation matters.

A mandate to use Federal assistance for only wheelchair-accessible standard urban mass transportation could be more appropriately devised after UMTA, in concert with interested and willing urban areas, has reasonably determined all the costs, benefits, and other ramifications of such fully accessible service. UMTA needs such information to make valid decisions on the social and economic merits of funding fully accessible transit systems. We recognize that UMTA has planned to undertake a program to monitor the effects of fully accessible bus service beginning in a limited manner in fiscal year 1977 (see p. 72) and at least one demonstration beginning in 1978 on how to meet the transportation needs of elderly and handicapped persons (see pp. 53 to 55).

However, we believe information on how much persons confined to wheelchairs would use fully accessible public transit and the impact that such service would have on capital and operating costs, schedules, and ridership in general, should be obtained as soon as possible. Furthermore, we believe that UMTA must be certain that its efforts to obtain such information are of sufficient scope to give meaningful results. These fully accessible transit services should be developed in several urban areas so that experience can be gained in different size urban areas with varying population densities, and with different modes of regular mass transit services. Of these modes, the most
important are bus and light rail systems which require wheelchair-lift devices to make them fully accessible.

**RECOMMENDATIONS**

We recommend that the Secretary of Transportation direct the Administrator of UMTA to be certain that UMTA's planned actions to study the ramifications of full accessibility encompass the following factors, and be undertaken as soon as possible to enable timely input for congressional consideration of the benefits and problems of fully accessible urban mass transit:

---Determine which urban areas would provide the best mix of urban size, population density, different modes of transportation, and other pertinent factors, and would be willing to provide fully accessible regular transit services.

---Support projects for totally accessible mass transit systems which could serve as demonstrations of regular route public transit services that are fully accessible by all elderly and handicapped persons. These projects should be undertaken in a number of urban areas of various sizes and population densities sufficient to develop conclusive data on the benefits and problems of fully accessible regular urban mass transportation services.

**FUTURE TRANSIT LEGISLATION**

When future urban mass transportation legislation is being developed, the following should be recognized if a Federal mandate to provide only wheelchair-accessible standard urban mass transportation services is contemplated:

---An immediate mandate to spend Federal funds for only a specific low-floor, wide-door ramped bus could impose a moratorium on manufacturing standard urban mass transit buses in the United States until that bus could be developed if it was not a production model. If such a mandate is legislated, its implementation date should coincide with the time when that bus reasonably could be made commercially available.

---Based on a range of prices quoted in September 1976 by the three manufacturers of standard urban transit buses, a mandate to spend Federal
funds for only wheelchair-accessible present technology buses would increase the cost of each new bus about $5,800 to $9,000 each. The annual demand for new urban transit buses is about 5,000 buses, so the additional annual cost to the Federal and local governments would range from about $29 million to about $45 million.

--Available statistics indicate that within the service area of standard urban mass transit systems nationwide there are approximately 700,000 elderly and handicapped persons who would be able for the first time to use standard urban transportation services if they were made wheelchair accessible. However, it is not known how many and to what extent these persons would use the accessible services, and the impact that providing such services would have on ridership in general.
CHAPTER 6

SCOPE OF REVIEW

We reviewed aspects of UMTA's administrative, legal, and program actions on the transportation needs of elderly and handicapped persons.

Our review was made at UMTA headquarters in Washington, D.C., and UMTA regional offices in Boston, Massachusetts; and San Francisco, California. We reviewed applicable legislation, policies, procedures, and regulations, and records and reports relating to Federal grants. We also interviewed pertinent UMTA officials, representatives of the transit industry, and representatives of organizations of elderly and handicapped persons. We reviewed transit-planning and capital improvement projects in Boston and New Bedford, Massachusetts; Portland, Maine; the State of Rhode Island (16(b)(2) program only); and San Francisco, Fresno, and Monterey, California. We also discussed capital projects designed to provide fully accessible regular transit services with transit officials in Santa Clara and Los Angeles, California.
Dear Mr. Staats:

I am concerned over the apparent unresponsiveness of the Urban Mass Transportation Administration to the transportation needs of the handicapped.

It had come to my attention that UMTA has, in fact, actually hindered the development of transportation systems which would serve transit dependents by refusing to promulgate appropriate regulations, delaying equipment development programs, participating in lawsuits by providing expert testimony against transportation for the handicapped, and submitting amicus curiae on the side of defendants. Such actions are reprehensible in light of the Federal mandate given to UMTA that it make definite efforts to insure that public transportation is made available to the handicapped.

After reviewing a copy of your study which touched briefly on this issue, Grants to Improve Transit Systems--Progress and Problems, B-169491, November 25, 1974, which was so kindly provided me by Mr. Gerald Killian of your staff, I am even more concerned that UMTA is not doing an adequate job.
Elmer B. Staats -2- January 29, 1976

I am, therefore, requesting a GAO study of the actions of UMTA in regard to the transportation needs of the handicapped. Thank you for your cooperation.

Sincerely,

John E. Moss
Member of Congress

JEM: Pf
Thir. Quattrociocchi
RM 4848