

Delivering on the Promise:

**U.S. Department of
Transportation**

**Self-Evaluation
to Promote
Community Living for People
with Disabilities**

**Report to the President
On Executive Order 13217**

Department of Transportation

I. Executive Summary

Key findings:

The United States Department of Transportation (DOT) has many programs and initiatives that are oriented to increasing the accessibility of transportation infrastructure and providers to people with disabilities. These include programs in almost all modes of transportation, including pedestrian access. Lowering barriers to people with disabilities is a key mission of the Department.

Key policies, programs, and laws which should be revised or modified to improve the availability of community-based services for individuals with disabilities:

DOT's statutes, policies, and programs generally have the effect of expanding the availability of community-based services for people with disabilities through lowered barriers to transportation use and infrastructure. However, as discussed in DOT's Report, some policies, upon further study, analysis, and review, could be modified to increase availability.

Proposed action steps or solutions:

DOT will continue vigorously pursuing its initiatives for lowering barriers to people with disabilities, including working closely with other federal agencies, transportation stakeholders, and disability advocacy groups.

Key deliverable:

The President's New Freedom Initiative is intended to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the workforce and full participation in society. The Department is requesting \$145 million in FY 2003 to carry out the transportation component of New Freedom Initiative. This component consists of two programs: 1) a competitive grants program will make \$100 million available for alternative transportation provided by community-based organizations and other providers to integrate persons with disabilities into the workplace; 2) a pilot project program will make \$45 million available for innovative approaches to overcoming transportation barriers faced by persons with disabilities.

Legislative changes needed:

To achieve some of the accessibility improvement discussed in the report, legislative

changes will be needed.

Cost factors:

There are very substantial costs to both governmental and private entities associated with making the entire United States transportation infrastructure system fully accessible to people with disabilities.

II. Introduction

Secretary of Transportation Norman Mineta has stated in an accessibility policy statement that accessibility is a civil right. DOT's Performance Plan under the Government Performance and Results Act states, "Transportation is vital in maintaining independence and mobility for people with disabilities, linking them to employment, health care, participation in the community, and for their overall quality of life. The President's New Freedom initiative seeks to create a more accessible public transportation system for individuals with disabilities." DOT is committed to full compliance with and enforcement of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973, and the Air Carrier Access Act, which together guarantee the right to accessible transportation in major sectors of the American economy.

The goal of the U.S. Department of Transportation is to work together to ensure non-discrimination, accessibility, equal opportunity and equity in transportation infrastructure and services in the United States and within the U.S. Department of Transportation, through a unified and coordinated approach in internal and external civil rights, in workplace and employment matters, and in regard to civilian and military staff.

Although the United States possesses one of the safest and most extensive passenger transportation systems in the world, the system is unable to provide optimal mobility for selected and growing portions of the population. These segments include the elderly, people with disabilities, and the poor. Government investment in paratransit has provided many of the transportation options available to these populations. Although paratransit fills an important transportation gap for many parts of the population, its financial viability has been underwritten with substantial governmental funding, rather than from its own revenues.

Transportation represents a major portion of consumer, business and government expenditures. It gives people the opportunity to access goods, services and activities that provide benefits. It helps determine where people can live, shop, work, go to

school and recreate. It affects individuals' opportunity to access education, employment, goods, services and activities. For all these reasons, transportation has major impacts on equity.

Population growth, an aging population, an increase in the number of persons with disabilities, migration, and shifts in employment are a few of the trends that present challenges to our efforts to move forward the strategic goal of mobility and accessibility. As the population increases, there will be a higher demand for all modes of transportation, and the dimensions of travel (such as mode, time, routes, destinations) will vary. An increase in the older American population will increase the demand for elderly and disabled friendly fixed route vehicles, paratransit, and other transit services that will provide opportunities for independent living and access to necessary goods and services.

There are two main objectives in transportation: mobility and access. Mobility is the act or ability to move from one's present position to one's desired position in another part of the environment safely, efficiently, and comfortably. Mobility benefits come from enabling people to more effectively participate in society as producers, consumers, citizens, and community members. Access is the ability of people to obtain desired goods, services and activities. Access is affected by the quality of mobility (movement of people and goods), substitutes for personal mobility (such as electronic communications and delivery services), and land use patterns. For example, access for non-drivers can be improved not only by providing better transit service (a mobility strategy), but also by ensuring that they can find suitable housing within convenient walking distance of services such as stores and medical facilities, and that they are able to use the Internet and other communication technologies to obtain information and order goods and services. Providing mobility for people and goods is transportation's most essential function. Mobility is important because it widens the geographic horizon of our employment, housing, shopping and recreation opportunities. Mobility also extends the trading area within which local goods and services are marketable. In other words, mobility is valuable because it provides access to jobs, services and markets.

How DOT Is Organized:

DOT is organized into eleven operating administrations, the Office of the Secretary, and allied components. These include the following:

Bureau of Transportation Statistics (BTS)

Federal Aviation Administration (FAA)

Federal Highway Administration (FHWA)

Federal Motor Carrier Safety Administration (FMCSA)
Federal Railroad Administration (FRA)
Federal Transit Administration (FTA)
Maritime Administration (MARAD)
National Highway Traffic Safety Administration (NHTSA)
Office of the Inspector General (OIG)
Research and Special Programs Administration (RSPA)
Saint Lawrence Seaway Development Corporation (SLSDC)
Surface Transportation Board (STB)
Transportation Administrative Services Center (TASC)
United States Coast Guard (USCG)
Transportation Security Administration (TSA)

USDOT Mobility Principles for People with Disabilities:

These are principles to increase the mobility of people with disabilities and/or expand their access to goods and services.

1. Availability: Transportation must be available if it is to be used to reduce immobility. For example, urban bus service can be enormously productive economically, and its curtailment, even in low-patronage, off-peak hours, can create added travel costs, income losses, and immobility that exceeds by many times the dollar savings to transit agencies from service reductions. (See “Using Public Transportation to Reduce the Economic, Social, and Human Costs of Personal Immobility,” Transit Cooperative Research Program, Crain & Associates with Ricardo Byrd and Omniversed International, 1999)
2. Equity: Everyone should enjoy at least a basic level of access, even if it requires extra resources to accomplish.
3. Seamlessness: Transition between transportation modes should be accessible. For example, Project Action has noted that many existing transit stations have direct connections to commercial, retail, and residential facilities, but the route is often not accessible. Project Action proposes that the transportation agency should include

language in agreements it has with the facilities that require or encourage the provision of an accessible route from the direct connection point into the connected transit facility.

4. Inclusiveness: Technology, housing, transportation and other aspects of community life should be designed to accommodate people with disabilities to ensure a more inclusive and productive society for all Americans.
5. Equivalence: Service for people with disabilities should extend throughout the general service area and operate during the same hours as the system used by the general public. Contrary to some assumptions, people with disabilities are dispersed throughout the general population and their ultimate travel needs are not significantly different from the general population.
6. Efficiency: We should explore strategies that will ensure access and full participation in society for the greatest number of people at the lowest and most rationally allocated cost.
7. Safety: Accessibility in transportation infrastructure should be safe, including for people with disabilities. Changes being contemplated in transportation infrastructure that may at first appear to be isolated from disability concerns may have such implications. Customer safety concerns extend to the passenger and user with disabilities in ways directly related to their disabilities. For example, the Access Board has noted that very preliminary and limited research suggests that roundabouts discourage pedestrian use and that they are a significant barrier to pedestrians with vision, mobility, and cognitive impairments.

Some safety issues for people with disabilities are not obvious. For example, in Oregon in 1999 it was found that many drivers hired to transport people with disabilities had criminal records. Background checks had not been done. To this end, the Department of Justice has published "Guidelines for Screening Persons Working with Children, the Elderly, and Individuals with Disabilities in Need of Support," Publication Number NCJ 167248.

Finally, the terrorist attacks of September 11, 2001 pointed out some of the special problems faced by people with disabilities in emergency situations. Transportation providers and infrastructure partners must see to it that the needs of people with disabilities in emergency situations are met. This will require emergency planning by working together with people with disabilities.

8. Reliability: Transportation should be reliable. All transportation infrastructure users want the systems to be reliable. Yet, for people with disabilities, mechanical systems breakdowns may result in a complete denial of access. For example, out of

service elevators and escalators in a transit system may be a mere inconvenience to nondisabled users, but may be an inaccessible barrier to users with disabilities.

9. **Reality-Based:** Plans for use of transportation infrastructure elements in the U.S. should be cognizant of the realities of technology now, but be cognizant that technology improvements and changes are almost inevitable.
10. **Consultation:** People with disabilities should be thoroughly involved in the decision-making process for improved accessibility and mobility. Throughout each stage of planning and implementing actions for improved accessibility and mobility, disability advocacy organizations and knowledgeable resource individuals within the disability community should be active partners in creating a transportation network that is fully usable by people with varying types of disabilities.

III. Statutory and regulatory mandates and executive orders regarding lowering barriers to community inclusions for people with disabilities.

Americans with Disabilities Act: Non-discrimination against people with disabilities in transportation infrastructure and providers.

Transportation Equity Act for the 21st Century (TEA-21): Provides flexibilities for state transportation funding on enhancements that lower barriers to people with disabilities. Extended the reach of the Air Carrier Access Act to foreign airlines operating in the United States. It also includes specific provisions for studying lowering of barriers to people with disabilities, such as that concerning insulin-controlled diabetic commercial over-the-road truck drivers. (Discussed in more detail below.)

New Freedom Initiative: The President's New Freedom Initiative is intended to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the workforce and full participation in society.

Section 504 of the Rehabilitation Act of 1973, as amended: Non-discrimination against people with disabilities by recipients of federal financial assistance from DOT.

Section 508 of the Rehabilitation Act of 1973, as amended: Requires electronic information technology accessibility for software and hardware acquired by the federal government.

Air Carrier Access Act (ACAA): Non-discrimination against people with disabilities by commercial passenger airlines.

Executive Order on Increasing Employment of Adults with Disabilities: USDOT is a member of the mandated federal interagency task force.

IV. Descriptions of programs which have as a goal such lowering or eliminating of barriers.

As discussed elsewhere in this report, many of DOT's programs have as a goal lowering or eliminating barriers to full participation in society of people with disabilities.

The Interagency Committee on Disability Research (ICDR) is one of the only vehicles to facilitate Federal agencies sharing, reviewing, discussing, and planning research efforts in this field. There is a need to identify important research gaps. The National Academy of Sciences' Institute of Medicine has stated, "In general, weaknesses in the current spectrum of federal programs in disability and rehabilitation-related research are not due to inappropriate priorities or other problems within the programs themselves, but rather to a general insufficiency in the magnitude of the overall program of research, its limited visibility, and a lack of effective coordination of the overall constellation of programs. Thus, the constellation of federal research programs in rehabilitation science and engineering needs to be reorganized and administered in a fashion that will improve interagency coordination, enhance visibility, and expand research for the purposes of improving the health, independence, productivity, and quality of life for people with disabling conditions."

[See discussion elsewhere in this document on DOT's contribution to the President's New Freedom Initiative.]

[See discussion elsewhere in this document on the DOT/HHS Council on Access and Mobility.]

[See discussion elsewhere in this document on DOT's statutory enforcement responsibilities.]

[See discussion elsewhere in this document on specific operating administration programs.]

V. Accomplishments by USDOT in these areas.

Issued DOT Final Rule on Over-the-Road buses in September 1999, requiring accessibility of new Over-the-Road buses and bus service.

Issued DOT Final Rule in August 1999 eliminating \$2,500 cap on liability of airlines to passengers for loss or damage to their wheelchairs and other assistive devices.

Secretary issued Departmental Accessibility Policy Statement in July 1999, stressing access for persons with a disability to all modes of transportation and deeming accessibility in transit as an important civil right.

Issued DOT Final Rule requiring priority seating for travelers with disabilities to accommodate their disabilities and incorporating a general ADA requirement on reasonable accommodations into DOT's Air Carrier Access Act (ACAA) rules. The Department has worked to strengthen enforcement provisions of the ACAA through legislative initiatives, resulting in new AIR-21 provisions requiring investigations of each ACAA complaint, increasing the maximum civil penalty for ACAA violations to \$10,000, and bringing foreign air carriers under ACAA coverage. Until April 5, 2000, foreign air carriers were not covered by the ACAA, although unreasonable discrimination against disabled air travelers was otherwise prohibited by law. The Department has improved its tracking of disability complaints filed against air carriers to allow identification of patterns of non-compliance. These patterns will be evaluated and followed up with necessary enforcement measures. Over the past year, the Enforcement Office has instituted an investigation of at least six domestic air carriers for violations of the ACAA relating to boarding and wheelchair assistance. Recent precedent-setting cease and desist orders and monetary fines have been issued by DOT. Additional resources have been obtained to support enforcement of the ACAA. Through his FY 2002 budget, President Bush requested and received additional resources of \$2.5 million and 18 new positions for ACAA enforcement.

At the request of DEAF-DOT (DOT's deaf employees' organization) and DOT/ADA (DOT's employees with disabilities organization), DOT's General Counsel issued a March 27, 2000 memorandum to all Departmental managers and supervisors, stressing their legal obligations of affirmative action for persons with disabilities under Section 501 of the Rehabilitation Act.

Distribution of new DOT publications comprehensively outlining maximum access and guidelines on accessibility for sidewalks, trails, and airports.

Unveiling of new DOT website on accessibility, coordinating and integrating links to DOT, the federal government, and advocacy organizations.

Announcement of \$10.3 million in FTA Over-the-Road bus grants to assist in the capital costs of making over-the-road buses accessible.

Began to publish, on a monthly basis, in DOT's Air Travel Consumer Report, the number of disability-related complaints DOT receives for each major airline, providing useful information to disabled travelers.

Issued DOT Final Rule requiring lifts for small commuter aircraft to facilitate the boarding by individuals with disabilities; harmonizing requirements relating to airport facilities in the Department's Section 504 and ACAA regulations; and clarifying provisions concerning communicable diseases.

May 2001 issuing of a final rule requiring airports and air carriers to provide boarding assistance on aircraft with a seating capacity of 31 or more to individuals with mobility impairments: On May 3, DOT published an amendment to 49 CFR Part 27, its regulations implementing Section 504 of the Rehabilitation Act. The amendment appears in the Federal Register, Volume 66, beginning on page 22107. In the same notice, DOT also amended 14 CFR Part 382, which implements the Air Carrier Access Act. The amendments require airports and air carriers to provide boarding assistance to individuals with disabilities by using ramps, mechanical lifts, or other suitable devices where level-entry boarding by loading bridge or mobile lounge is not available on aircraft with a seating capacity of 31 or more passengers. The final rule parallels the 1996 final rule for aircraft with a seating capacity of 19 through 30 passengers. The rule became effective November 9, 2001, and includes a transition schedule. Section 27.72(d), as amended, requires airports and their carriers to sign a written agreement no later than March 4, 2002, allocating responsibility for meeting the new boarding assistance requirements. The agreement must provide for complying as soon as possible, but no later than December 4, 2002.

DOT sponsored its first forum, as requested by the National Council on Disability, on "Working Together to Improve Air Travel for Passengers with Disabilities," with attendance by industry representatives, disability advocacy groups, DOT employees, and government officials.

USDOT's Federal Aviation Administration developed, coordinated and provided training to over 300 architects/engineers & real estate officers during FY 2000 on Uniform Federal Accessibility Standards Requirements and Barrier Removal.

The FAA issued revised ADA and Rehabilitation Act Operating Procedures in FY2000. This order describes the standards and procedures essential for the FAA's implementation of Title II of the ADA and Section 504 of the Rehabilitation Act of 1973, as Section 504 applies to the airport grant program.

Twenty-three new fully accessible rail transit systems have been funded in the last ten years by DOT.

VI. How does DOT know the views of people with disabilities regarding transportation accessibility?

DOT has a significant number of employees with disabilities and two organizations that represent such employees. Secretary Mineta has met with these organizations.

In 2001, DOT's Secretary has met with the National Council on Disability and with a representative group of disability advocacy groups.

DOT participated in the Community Access Task Force's National Listening Session on September 5, 2001.

DOT has excellent on-going relationships with numerous disability advocacy groups.

DOT is a member of the Presidential Task Force on Employment of Adults with Disabilities, and has fully participated in its activities, including listening sessions and conferences.

DOT is one of 12 federal members of the U.S. Architectural and Transportation Barriers Compliance Board (Access Board) and has participated in many Access Board Advisory and Ad Hoc committees. The Access Board solicits input from disabled individuals and organizations representing them and shares that information with DOT and other interested groups. DOT will incorporate the standards into Department regulations when they become final. The Access Board has published a design guide, *Accessible Rights-of-Ways*, to help transportation professionals understand ADA requirements. It offers sidewalk and crosswalks design recommendations. DOT has also worked with the American National Standards Institute on these issues.

DOT receives and investigates the second largest number of ADA Title II administrative complaints of the eight federal agencies designated to receive such complaints.

DOT participates on an interagency committee sponsored by the Department of Justice on Americans with Disabilities Act technical assistance.

In 2001, DOT held a forum with disability advocacy groups and airline representatives, to discuss disability access on commercial passenger airlines.

DOT's National Highway Traffic Safety Administration has held listening sessions with

disability advocacy groups, rehabilitation groups, insurance industry representatives, and automobile manufacturers to discuss personally owned vehicles which are adapted by their owners to serve the needs of operators and passengers with disabilities.

DOT's Federal Transit Administration has held numerous meetings with disability advocacy groups to discuss accessibility issues in public transit.

DOT's Bureau of Transportation Statistics is planning a national survey of people with disabilities to determine concerns with usability and accessibility of transportation infrastructure and providers.

DOT is a member of the federal Interagency Committee on Disability Research (ICDR), led by the U.S. Department of Education.

DOT is one of the founding partners in the DOT/HHS Council on Access and Mobility, which is charged with finding ways to make human services transportation more efficient and effective. This Council regularly invites disability advocacy groups to attend meetings and offer input.

DOT is a member of the ADA Technical Assistance Coordinating Committee, chaired by the Department of Justice, which provides a forum for Federal agencies to exchange ideas and share information about their respective ADA technical assistance activities and plans. In addition, staff representatives receive resource information that can be used to help other staff and the agency's constituents in knowing where to turn for reliable sources of information about the ADA.

In addition to soliciting docket comments on rulemakings impacting people with disabilities, DOT has worked to include persons with disabilities on advisory committees and at forums dealing with issues impacting the disabled community. For many years DOT employees have participated in conferences and meetings concerning transportation accessibility. Attendance at these events provided DOT the opportunity to gather information and advice from a variety of individuals with disabilities.

VII. What transportation and transportation-related barriers to full community inclusion are there to people with disabilities?

Curb Cuts:

People with disabilities often state that their first priority in making transportation infrastructure accessible is building and maintaining curb cuts in America's cities, towns, and suburbs. Curb cuts, also called curb ramps, are the sloping transitions between sidewalks and streets and roads. These make mobility by people with mobility impairments, such as wheelchair users, much easier, because such users can independently move from sidewalk to street as part of an accessible route. Curb cuts contribute significantly to independent travel by people with mobility impairments. Although these curb cuts have been in essence required in entities that receive federal financial assistance since 1973, hundreds of thousands, and perhaps millions of curb cuts have not been built. Many curb cuts that have been built are not properly maintained, or were not built properly. Curb cuts cost approximately from \$500 to \$2600 each when retrofitted to existing sidewalks/curbs/streets, with a commonly quoted cost of \$1200 each. Curb cuts have synergistic benefits to many other users, such as families pushing baby strollers, people pulling home grocery carts, and children on bicycles and roller blades. At least one group of people with disabilities has expressed reservations about curb cuts-- some blind advocacy groups state that sharp, angled, distinctions between sidewalks and streets are easier for the blind to locate by feel. DOT generally has jurisdiction over curb cuts because curbs run along the edges of streets and roads, and curbs are often rebuilt when a road is fixed.

Solutions:

Federal Highway Administration (FHWA):

In July 1999, the DOT issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in Federally-assisted programs is governed by the DOT regulations (49 CFR part 27) implementing Section 504 of the Rehabilitation Act (29 U.S.C. 794). The FHWA has specific ADA policies for statewide planning in 23 CFR 450.220(a)(4), for metropolitan planning in 23 CFR 450.316(b)(3), and for the National Environmental Policy Act (NEPA) process in 23 CFR 771.105(f). These regulations require application of the ADA requirements to Federal-aid projects, including Transportation Enhancement Activities (TE). Some TE projects may not require installation of accessible facilities, such as a project which consists solely of acquisition of a scenic easement. Others require full compliance with

ADAAG, such as a newly constructed interpretive center for a scenic highway. Parking, restrooms, water fountains, telephones, and similar facilities built as part of a TE project must be accessible. Alterations of historic facilities are covered under 28 CFR 36.405, which provides some alternatives within ADAAG, but applies only to private facilities subject to title III of the ADA.

FHWA has issued a document on “Public Involvement Techniques for Transportation Decision Making,” which includes a substantial section on the ADA, and involving people with disabilities. It notes, “Agencies’ efforts are not fully inclusive of everyone’s ideas until they include people with disabilities. This requires an expansive approach to accommodate the population that is disabled and that would not otherwise be accommodated in transportation plans or processes.” It also states, “Every State and MPO [metropolitan planning organization] should make events accessible.”

Transportation facilities must include features that will allow people of all abilities to use them. The federal-aid highway program can work hand in hand with the ADA which requires many pedestrian facilities be accessible for people with disabilities. Accessibility is not an exclusive or separate issue. Rather, accessibility design is fundamental to the walking environment, because all pedestrians with or without disabilities benefit from accessibility design. Accessibility is an intrinsic part of planning, retrofitting and constructing pedestrian facilities, along with safe accommodation and good design. Accessibility is a safety issue, because if a facility is not accessible, then it is not safe for more than 54 million people in this country who have some form of disability.

FHWA has issued Volume 2 of “Designing Sidewalks and Trails for Access.” *Designing Sidewalks and Trails for Access, Part I, A Review of Existing Guidelines and Practices*, covers accessibility standards, legislation requirements, users’ abilities and needs, the planning process, analysis of current design practices. *Designing Sidewalks and Trails for Access, Part II, Best Practices Guide*, is a guide for people responsible for constructing sidewalks and trails (engineers, designers, public works, contractors, developers, landscape architects, and planners). It is a step by step approach to creating usable pedestrian facilities, and takes into account all users’ needs (universal design). FHWA has made it clear that waivers to constructing accessible routes of travel are difficult to obtain: “A waiver may be applied for to the requirements of paragraph (a) above on a case-by-case basis. In general a waiver is difficult to obtain and based on severe local conditions. Provision of an alternate accessible routing in lieu of making a pedestrian overpass or underpass accessible also requires a waiver... The design of all new and altered rest area facilities and parking facilities must comply with the requirements of accessible design.”

FHWA is also obligated to provide technical information to the field about how to comply with highway-related ADA provisions -- how to ensure that new design and

construction is in compliance and how to implement effective procedures for reducing vulnerability to complaints. Another area in which this technical guidance is particularly necessary is in the right-of-way program. In the course of this program, FHWA frequently appraises, acquires, and disposes of structures subject to ADA provisions -- that is, public accommodations such as business or commercial facilities. FHWA right-of-way personnel have to understand how ADA affects the appraisal value, management, and resale of these structures; they must also understand the impacts and intricacies of relocating people with disabilities from these structures. To this end, FHWA's right-of-way program has developed a white paper for state departments of transportation and local public agencies. FHWA is also developing a course to ensure universal design standards are incorporated in all new work and on all repairs.

Paratransit, Innovations, Alternatives:

Paratransit is the parallel public transit system set up under the ADA to provide accessible transportation to people with mobility impairments who live in areas served by fixed route public transit systems that are not fully accessible. Many transit properties complain that they cannot comply fully with the requirements for ADA Complementary Paratransit because of budget constraints. Disability advocates are concerned with capacity constraints by transit providers, lack of timely service, missed calls for pick-ups, and other issues.

Capacity constraints are illegal limits placed on quantity of service made available by operators. The ADA requires fixed route operators to provide Complementary Paratransit service for passengers with disabilities who cannot use buses and subways or other "fixed-route service."

A dramatic increase in demand has led to record ridership, resulting in capacity constraints. In some cases, resources have not been allocated by transit properties to meet the increased demand. In many cities, advocates have had to wage long battles for the basics: purchase and use of accessible buses, regular maintenance of bus accessibility features (especially wheelchair lifts), implementation of effective paratransit programs, and alteration of key stations in rail systems to provide access. Compliance is challenging in key stations because they were built at different times, with different facility standards.

There are an estimated 54 million Americans who have a significant physical or mental disability that significantly limits one or more major life activity. Approximately 70% of adult persons with disabilities are unemployed. Even with the Americans with Disabilities Act of 1990, lack of adequate transportation continues to be a primary barrier to work for people with disabilities: one-third of people with disabilities report that inadequate transportation is a significant problem. There is a need for programs

that would expand the transportation mobility options available to persons with disabilities beyond the minimum required under the Americans with Disabilities Act of 1990 (ADA). The ADA only makes existing transportation accessible. It does not address the transportation gaps that exist. There are many continuing and unique challenges faced by persons with disabilities that stretch beyond the ADA, or that could be better addressed than by current methods being applied. The following are examples of remaining issues:

The Olmstead court decision is de-institutionalizing persons with cognitive disabilities so that they may be part of their communities. These individuals have many unique transportation challenges that need to be addressed and solutions found. In addition, President Bush issued an Executive Order in which he expanded the concepts in the Olmstead Supreme Court decision to include federal agencies evaluating their programs and taking necessary actions for greater community inclusion of people with disabilities. Transportation is a vital part of such inclusion, for example, from home-based services to jobs or training.

There is a need to test emergency evacuations systems for persons with disabilities, especially in view of terrorist attacks.

Current ADA complementary demand-responsive transportation systems do not respond to real time trip needs, but instead respond to next day trip reservations. Persons with disabilities cannot always precisely plan trip needs in advance. Current paratransit services provided by transit providers are expensive, heavily subsidized, and result in a large number of administrative complaints due to lack of service or poor service

Paratransit and Fixed Route Public Transit:

For those individuals who use either paratransit or fixed route transportation, there continue to be concerns in several areas:

1. Working Equipment: Are lifts, elevators, and other equipment that facilitates access in working order?
2. Stop Announcements: Are drivers consistently calling out stops?
3. Securement: Are drivers knowledgeable about the securement system, and can they secure an individual effectively and efficiently?
4. Driver Training: In addition to the areas of securement and stop announcements, have drivers received training to adequately assist passengers with disabilities in a courteous and respectful manner?
5. Scheduling: For those individuals who use Paratransit, do services operate in a timely and efficient way? Is there a chance that services will not be dispatched, or those services will be significantly delayed without any notification?

Solutions:

Federal Transit Administration (FTA):

FTA has responsibility for enforcing the ADA regulations regarding paratransit. It has included accessibility in its strategic plan: "Shape America's future by ensuring a transportation system that is accessible, integrated, efficient, and offers flexibility of choices."

Under the ADA, FTA enforces the following provisions: (1) No transportation entity is permitted to discriminate against an individual with a disability in connection with the provision of transportation service; (2) All new vehicles purchased by public and private entities after August 25, 1990, must be readily accessible to and usable by persons with disabilities, including individuals who use wheelchairs; (3) Public entities that provide fixed route transit must provide complementary paratransit service for persons with disabilities, who are unable to use the fixed route system, that is comparable to the level of service provided to individuals without disabilities; and (4) Public entities operating light, rapid or commuter rail systems must designate key stations which were to be made accessible by July 26, 1993, unless the operator received a statutory time extension.

The Formula Grants for Special Needs of Elderly Individuals and Individuals with Disabilities provides transit capital assistance, through the States, to organizations that provide specialized transportation services to elderly persons and to persons with disabilities. The Capital Assistance Program for Elderly Persons and Persons with Disabilities provides financial assistance for the specialized transportation service needs of elderly persons and persons with disabilities. The program is administered by the States and may be used in all areas (urbanized, small urban, and rural). The Nonurbanized Area Formula Program provides financial assistance for the provision of public transportation services in nonurbanized areas and is also administered by the States.

FTA continues to monitor the implementation of the ADA to ensure that persons with disabilities have equal access to mass transit services as required by law. FTA oversight concentrates on three primary areas: the provision of ADA Complementary Paratransit Service, the accessibility of the fixed route service, and the accessibility of rail service as required for existing designated key stations, newly built stations and those undergoing major alterations. In addition to the triennial review and oversight activities, it also has a process in place for addressing complaints from riders regarding the ADA.

ADA enforcement has been a major component in reaching the current standing of over 80% of America's public transit fleet vehicles and key existing subway, commuter rail,

and light rail stations being accessible. Since 1996, FTA has resolved approximately 200 ADA complaints per year. FTA's ADA Team received and fielded more than 5200 telephone calls through the ADA hotline in calendar year 2000. The ADA Team responds to electronic inquiries from across the country, providing assistance to persons with disabilities, transit properties, local and state governments, public service agencies, attorneys, and the general public. FTA expanded the range of information on its public web site including an ADA complaint form and a copy of the DOT ADA regulations. FTA conducts Triennial Reviews of all grantees receiving FTA capital funds to ensure that certain requirements are met.

Geographic Distribution of Population with Disabilities:

People with disabilities are broadly distributed geographically throughout the U.S. population. Because they are not concentrated, it is harder to serve them using models that have been tried for some other transportation disadvantaged populations, such as those based on race or ethnicity. Lack of critical mass of numbers makes economies of scale difficult to achieve.

Solutions:

As an agency with nation-wide reach, DOT is helping to identify and serve the transportation needs of people with disabilities everywhere in the United States.

Rural Issues:

Despite more than 20 years of federal involvement in supporting rural transit programs, nearly 1,300 rural counties in the U.S. have no public transportation. (Community Transportation Association of America) Forty percent of all rural residents live in an area with no form of public transportation, another 28% live in areas with very low levels of service provision (Rucker, 1994; CTAA, 1998). Nearly 80% of rural counties have no public bus service, compared to 2% of metro counties (Federal Highway Administration, 1995). One in every 14 households in rural America has no vehicle. Nearly 57% of the rural poor do not own a car (Rucker, 1994). Ninety-six percent of public assistance recipients have no personal automobile (Miller, 1997). (Rural Policy Research Institute)

The lack of transportation is one of the most frequently cited problems facing people with disabilities living in rural areas. There are approximately 13.2 million people with disabilities living in rural areas of the U.S. Despite the significance of the problem, few models for delivering transportation to people with disabilities in rural areas have been reported. Accessible rural public transportation systems are rare and costly to operate due to low usage and long distances traveled.

The Department of Health and Human Services has created a Rural Task Force to conduct a department-wide examination of how HHS programs can be strengthened to better serve rural communities. The Task Force, assigned to report its findings to HHS Secretary Thompson by October 25, 2001, asked for and received public comments on programs serving rural communities. To date comments received by HHS have identified the lack of transportation (especially for people with disabilities) as a major obstacle in the delivery of HHS programs in rural areas. In response to these comments HHS and DOT have initiated discussions to determine how they can jointly address the identified problems.

Solutions:

The Federal Transit Administration bears the primary responsibility within DOT for addressing the needs of people with disabilities who lives in rural areas. Please see the discussion of FTA's responsibilities, projects, and accomplishments.

The purpose of the Rural Transportation Accessibility Incentive Program , administered through the FTA, (Web site: <http://www.fhwa.dot.gov/tea21/factsheets/rtaccess.htm>) , is to help over-the-road bus operators finance the incremental capital and training costs of complying with the Department's final rule on accessibility of over-the-road buses. Eligible projects include the incremental costs of ADA accessibility for operators of over-the-road buses in intercity fixed-route service and other service such as local fixed route, commuter, charter and tour service. There is a competitive grant selection process. Funding is \$24.3 million for FYs 1999 - 2003. DOT is developing a Memorandum of Understanding (MOU) with the Department of Agriculture (USDA) on a variety of rural issues. Rural accessible transportation could be included in that MOU.

Over-the-Road Buses:

Some of the most active disability advocacy groups feel strongly that over-the-road buses (OTRBs) should be fully accessible to people with mobility impairments. These are large intercity buses that typically carry luggage and packages under the passenger area. Currently almost no such buses are accessible. They provide one of the few kinds of public transportation in rural areas, and are used largely by low-income people. Many people with disabilities are also low-income, because of the very high unemployment rate among people with disabilities.

Solutions:

Federal Motor Carrier Safety Administration:

DOT issued regulations under the ADA in 1998, requiring the phased-in accessibility of over-the-road buses. The rulemaking was highly controversial. Long sought by members of the disability community and strongly opposed by the OTRB industry, the rule was issued more than five years after the ADA's statutory deadline. The rule contained information collection requirements to respond both to disability community concerns that bus companies would not provide the required accessible buses and service and to industry concerns that the cost of accessibility would have few benefits as measured by increases in ridership by persons with disabilities. Over-the-road bus companies raised alleged adverse economic impacts on their profitability if they had to make their buses accessible.

TEA-21 provides a modest subsidy to OTRB companies to assist in compliance with ADA requirements. Due to past financial problems in the OTRB industry, the bus companies also receive a partial federal fuel tax exemption, which is effectively a subsidy. The grant program is administered by the Federal Transit Administration (FTA). FTA has administrative enforcement authority under Section 504 of the Rehabilitation Act of 1973 with respect to recipients of such subsidy funds. DOT has a statutory and regulatory responsibility to implement ADA requirements effectively with respect to the OTRB industry. DOT's Federal Motor Carrier Safety Administration (FMCSA) has an ongoing regulatory relationship with OTRB companies with respect to safety matters, and so has existing channels of communication with the industry that it can use for OTRB ADA program purposes. It has staff who collect and compile data concerning other aspects of OTRB operations, as well as resources in information systems and program expertise.

The DOT regulation required large, fixed-route over-the-road bus like Greyhound, whose service is the backbone of the intercity bus system, to make sure that all new buses they obtain are accessible, with wheelchair lifts and tie-downs that allow passengers to ride in their own wheelchairs. The rule requires fleets to be completely accessible by 2012. Most smaller fixed-route companies also will acquire accessible new buses, although they do not have a deadline for fleet accessibility. They also can provide equivalent service in lieu of obtaining accessible buses. Charter and tour companies will have to provide service in an accessible bus on 48 hours' advance notice. Fixed-route companies must also provide this kind of service on an interim basis until their fleets are completely accessible. The rule makes carriers accountable for providing this advance notice service by requiring them to compensate passengers when they fail to provide the required service on time. Small carriers which provide mostly charter or tour service and also provide a small amount of fixed-route service can meet all requirements through 48-hour advance-reservation service. Small carriers

have an extra year to begin complying with the requirements, which apply to them starting in October 2001, compared to October 2000 for large carriers.

Over-the-road buses are an important link in the U.S. transportation system, especially for low income people and rural families. DOT estimates that the cost of compliance will be \$22-\$30 million annually, and that new passenger traffic will reduce the cost to an estimated net cost of \$15-\$26 million per year. The Transportation Equity Act for the 21st Century (TEA-21) authorized an average of \$4.86 million in federal assistance from fiscal 1999 to 2003 to over-the-road bus companies to help pay for accessible costs. Another TEA-21 program makes available an additional \$31.4 million per year over the same period for rural intercity bus service.

Car Ownership:

There is a strong correlation between not owning a car, poverty and the infirmities associated with aging. Not owning a car is most prevalent among the poor-- including the elderly poor, the working poor and the unemployed. Physical disabilities associated with aging are another significant correlate of not owning a car. Physical disabilities that require wheelchair use are widely recognized as a powerful correlate of mobility disadvantage, but affect a much smaller population than the low rate of car ownership associated with poverty and/or aging. Not owning a car is also strongly correlated with urban location. Lack of car ownership is most isolating for those who live alone in suburban communities. Not owning a car seems to be least isolating for those with a large friendship circle and least immobilizing for those who live in urban settings suited to walking and the use of public transportation. The mobility available to those who do not own cars hinges on the ability of others to provide transportation when and where it is needed. These "others" include transit agencies, taxi companies, paratransit providers, family, friends, co-workers, neighbors, schools, churches, senior centers and social service agencies.

The Community Transportation Association of America (CTAA) reports that there are more than 100 million low-income, older Americans, and people with disabilities at risk of being unable to provide or afford their own transportation and who are likely to be dependent upon others for their mobility. The President's New Freedom Initiative will help address these problems.

Solutions:

DOT does not yet have programs that provide for acquisition of cars by people with disabilities. However, in its Welfare-to-Work programs, DOT has distributed information on charity car and car sharing programs. As discussed elsewhere in this Report, NHTSA has programs that provide consumer and safety information to people

with disabilities who wish to purchase adapted vehicles. Several of the major automobile manufacturers have programs to provide some financial assistance to people with disabilities who wish to purchase adapted versions of their products. The Department of Veterans Affairs will, under certain circumstances, help provide monetary assistance to veterans with disabilities in the purchase of such a vehicle. At least one state provides revolving microloans to assist in purchase of vehicles by people with disabilities.

Interrelationship of Housing and Transit:

One difficulty in providing accessible, integrated transit services is the lack of a requirement in other programs, such as HUD or HHS programs, that transit transfer locations be provided in their projects, particularly in renovation and new construction projects. Often it is an afterthought to put in a bus stop or paratransit transfer point. If planned correctly, transit can provide accessibility to facilities and programs for employees, customers, and clients. If it is not considered early the location can be too far from entrances or driveways may not provide enough room to provide the requested services.

Solutions:

There are currently no programs in DOT to address this issue, beyond the very broad range of public transit services supported by DOT. The housing services issues may be a fruitful one for HUD to address with the help of DOT. DOT provides federal financial assistance to public transit providers, which are motivated to locate public transit routes and stops near housing concentrations.

Job Access Placement and Transportation:

In job placement not every job is a good job. If the cost of providing transportation to remote locations exceeds the weekly pay of the returning worker, after a subsidy is exhausted, then the person will not be able to keep the position. If transportation needs to be provided, the job developer and agencies must consult and work with the transit operator to ensure that the service that is needed is available and affordable to the worker before they complete the placement.

Solutions:

FTA has addressed some of these issues through its Job Access and Reverse Commute program, and expanding efforts to work with the Department of Labor on issues relating to the role of local One-Stop Career Center Systems in addressing

individuals' transportation needs, as they relate to employment. In terms of responding to the opportunity issues in transportation, the Job Access and Reverse Commute Program has been established. This Transportation Equity Act for the 21st Century (TEA-21) initiative has two major goals: 1) to provide transportation services in urban, suburban and rural areas to assist welfare recipients and low income individuals access to employment opportunities, and 2) to increase collaboration among the transportation providers, human service agencies, employers, metropolitan planning organizations, states, and affected communities and individuals. The guaranteed funding levels will increase annually from \$50 million in FY1999 (actual funding for FY 1999 is \$75 million) up to \$150 million in FY2003. One of the criteria for project selection is the degree to which collaborative and consensus-based planning and decision-making processes have been utilized, with particular evaluation of participation by non-traditional/grass-roots organizations. Many of the projects are focused on expanding early morning, nite owl and weekend services.

The Job Access and Reverse Commute grant program provides funding on a competitive basis to communities trying to address gaps in transportation services to low-income people who are trying to work. As noted elsewhere, many people with disabilities are low-income and unemployed. It aims to establish a regional approach to job access challenges through the establishment of an Area-Wide Job Access and Reverse Commute Transportation Plan to facilitate region-wide collaboration among transportation and human service providers to connect welfare recipients and low-income individuals to employment activities. For more information, see www.fta.dot.gov/wtw/.

Non-Peak Hours Access:

Some people have commented that transit operators need to provide better accessibility and more mobility during non-peak hours. There are potential benefits of improving transit accessibility and mobility during non-peak hours but not all transportation system needs can be met with the limited funds available.

Solutions:

TEA-21 requires that the planning process for metropolitan areas consider projects and strategies that "...increase the accessibility and mobility options available to people..." as well as "...promote efficient system management and operation..." FHWA and FTA encourage transit operators and metropolitan planning organizations to consider the benefits and costs of these types of transit service improvements during the development of the revenue constrained plans and programs.

Availability of Oxygen on Commercial Flights:

FAA regulations prohibit passengers from bringing their own oxygen on board for use during flight. Passengers can, however, check empty oxygen cylinders as baggage for retrieval at their destinations. Only carriers can provide medical oxygen for passenger use in flight. A few do not provide it at all, citing training and other costs. Most do provide it, at an additional charge that deters some oxygen users from traveling. The disability community would like DOT to require all carriers to provide it, at no or nominal charge, through an amendment to the ACAA regulations. For a number of years disability advocates have asked the Department to issue a regulation requiring air carriers to provide oxygen to passengers needing it.

Solutions:

General Counsel's Office:

At a May 2001 forum organized by DOT's General Counsel's Office, the airline industry and disability groups agreed to discuss the issue of air carriers providing oxygen to passengers with disabilities and try to reach a joint recommendation they could make to DOT. They are currently in discussions concerning service animals traveling with people with disabilities and have agreed to tackle the issue of oxygen next. The Department will consider issuance of a Notice of Proposed Rulemaking on the subject in the near future. Representatives from the disability community and industry groups have expressed a willingness to work together to determine the feasibility of participating in a private negotiation on the use of oxygen aboard aircraft by passengers with disabilities. This commitment by disability community organizations and airline associations was a result of our first forum on "Working Together to Improve the Air Travel of Passengers with Disabilities." A joint proposal by disability groups and industry on oxygen use aboard aircraft would make the task of drafting a regulation concerning oxygen on commercial flights significantly more efficient.

There remain a number of accessibility issues unresolved. These include the following:

- Accessible terminal transportation systems;
- Boarding chair standards;
- Substitute transportation for persons unable to board small aircraft;
- Accessible lavatories on narrow body aircraft;
- Open captioning for in-flight movies and videos;
- TT service on aircraft.

A second forum was held on January 29, 2002. Topics included the following:

- Boarding and deplaning assistance;
- Stowage of wheelchairs and other assistive devices;
- New security procedures and their impact on passengers with disabilities;

Trip Planning:

According to Project Action, trip planning is the most critical segment of travel for people with disabilities. Here, they must use the telephone or Internet, maps, advice of others familiar with the transportation system's barriers and problems, and other aids to assess the feasibility of the trip. Ascertaining feasibility requires anticipating the barriers that the trip will present and "mentally" overcoming them beforehand. Only when feasibility is firmly established can travelers with disabilities begin the trip with substantial likelihood of successfully completing it.

Solutions:

Easter Seals' Project Action, a grantee of the Federal Transit Administration, has initiatives dealing with trip planning for people with disabilities.

Heavy Rail Vehicles:

According to DOT's Bureau of Transportation Statistics, "Transportation Statistics Annual Report 1999," "the percentage of transit vehicles providing accessible service under the ADA varied dramatically by type of transit, but was generally higher in 1997 than in 1993. About 68% of buses were ADA accessible in 1997, up from 53% in 1993. Only 29% of commuter rail vehicles were accessible in 1997, but this was higher than the 18% in 1993. A relatively large percentage of heavy-rail vehicles were ADA accessible, 78% in 1997, but there has been no improvement since 1994." In fact there has been a reported slight decline in accessibility of heavy-rail vehicles since 1994. There are reports that this decline may be an artifact of statistical reporting. Note that these statistics apply to public transit vehicles, and not AMTRAK. The Federal Railroad Administration does not appear to have statistics available on the number and percent of accessible AMTRAK passenger cars. At current rates of improvement in accessibility, all commuter rail vehicles will not be accessible until about the year 2015. There are also problems experienced with platform to car gaps.

Solutions:

There are some definitional issues regarding heavy rail vehicles. Some are public transit vehicles, under the jurisdiction of FTA, discussed elsewhere in this document. Others are AMTRAK passenger railroad cars, under the jurisdiction of the Federal Railroad Administration (FRA), which has jurisdiction over the ADA compliance of AMTRAK. FRA is developing new compliance review initiatives for monitoring the accessibility of AMTRAK rolling stock and facilities.

Call Boxes:

Emergency call boxes along highways are not always accessible to people with disabilities. Advocates believe that the Federal Highway Administration and other appropriate state and local agencies should ensure that highway emergency call boxes are accessible and that traffic signals and poles show flashing lights when emergency vehicles are approaching. However, it should be noted that call boxes are not necessarily under the jurisdiction of the FHWA, and that they are to a certain extent being superceded by cell phones.

Solutions:

Individual entities that control call boxes are moving to make them accessible, including installing TTY-type interfaces. But cell phones and intelligent transportation systems (including proprietary "On-Star" type car-and-dispatcher types systems) are superceding call boxes for obtaining emergency assistance.

Speed Bumps and Humps:

There is concern among some segments of the disability community, especially among those with back pain and with spine, hip and muscle problems who use wheelchairs and/or who drive, that speed bumps in roads affect them adversely. For example, the Commission on Disability of the City of Berkeley, California, testified to the City of Berkeley Transportation Commission and has received input from citizens concerning the access problems that speed humps cause for the disabled community. For some people with disabilities, the pain and injury that can result from driving or riding over speed humps makes these "traffic calming devices" into virtual barricades. For others, the unpredictable outcome of going over humps results in a deterrent to travel. When speed humps are located in the only clear path (sometimes the side of the roadway), they can also be an obstacle for pedestrians using wheelchairs. Those who believe strongly in this subject state that speed bumps are designed to cause discomfort for the average driver and that what is uncomfortable for a healthy person is at best extremely

painful and at worst injurious to certain, fragile, disabled individuals.

Solutions:

DOT and local jurisdictions have been in the position of encouraging use of speed bumps and humps for safety and traffic calming reasons. More research and legal analysis may be needed to determine if that enthusiasm is producing situations that unnecessary adversely affect people with disabilities.

Roundabouts:

Roundabouts, or the modern version of traffic circles, are generally difficult, bordering on inaccessible, for people with mobility and cognitive impairments to navigate. This is because traffic never stops, and pedestrian routes of travel are longer than with signalized intersections. However, roundabouts are becoming popular in the United States, and more cities, towns, and suburbs are installing them.

Solutions:

The Federal Highway Administration, which in DOT has general jurisdiction over pedestrian accessibility, noted in its document, "Designing Sidewalks and Trails for Access, Best Practices Design Guide," as a research recommendation, "Develop design strategies for improving pedestrian access at roundabouts. Currently, most roundabouts in the United States are difficult for people with vision impairments to use because they cannot determine when it is safe to cross the street. European and Asian designs...which use pedestrian-controlled traffic signals and set the crosswalks back four car lengths from the intersection, should be investigated."

Alleged Abuse of Systems:

There is a common undercurrent of criticism by some nondisabled people of alleged abuse of accessible transportation systems. These criticisms are heard most commonly in regard to alleged abuse of disability parking placards by people who are not visually mobility impaired. In addition, people with disabilities often criticize use of parking spaces designated for people with disabilities by people without disabilities.

Solutions:

Eligibility criteria for disability parking placards are largely under the jurisdiction of local entities, with guidelines provided by FHWA. DOT has received and investigated a few ADA complaints about abuse of this local discretion. Lack of police enforcement of ADA requirements is under the jurisdiction of the Department of Justice.

Commercial Drivers Licenses:

A number of individuals with disabilities and disability advocacy organizations, especially the American Diabetes Association, have noted that DOT has blanket regulatory exclusions for a wide range of disabilities in obtaining commercial drivers licenses for over-the-road interstate trucks and buses. There is a desire on the part of a number of individuals with covered disabilities to obtain such licenses to engage in their desired livelihood.

Solutions:

On July 31, 2001, FMCSA published a Federal Register notice seeking comments on a proposal to issue exemptions to FMCSA regulations that normally prohibit people with insulin-controlled diabetes from obtaining commercial drivers licenses (CDLs), primarily for over-the-road (OTR) interstate trucks. This is long-standing matter of some controversy. In TEA-21, there was a provision for a study to be done by FMCSA to evaluate the safety of lowering the barriers to obtaining CDLs by insulin-controlled diabetics. FMCSA conducted this study and provided the results to Congress last summer. The Equal Employment Opportunity Commission, the Department of Justice, and the Presidential Task Force on Employment of Adults with Disabilities (PTF) expressed great interest in the subject, especially as a possible precursor to lowering barriers to people with a wide range of other disabilities/medical conditions named and excluded from CDLs in the 1930's-era CDL regulations, and strongly encouraged the barrier-lowering.

The comment period ran thru October 1, 2001. Safety issues get raised regarding diabetic truck drivers. Because of the physiological conditions that can happen to people with diabetes if they do not monitor their body conditions and medications very carefully, there is fear in some circles of how safe they are behind the wheel. Many, however, drive privately owned cars, light trucks, SUVs, and recreational vehicles. The licensing requirements are very different for such vehicles as opposed to OTR trucks. FMCSA's proposal contains many conditions that have to be met before an exemption would be granted. DOT was involved in discussions among EEOC, DOJ, and the PTF. No date has been set for issuing final regulations.

Historically, medical certification has been denied to people with vision impairments (that is, whose corrected vision is not at least 20-40 in each eye), hearing impairments, diabetes, and epilepsy. Since the time these regulations went into effect -- which was about 1937 -- many medical and technological advances have been made. When the ADA was passed, Congress directed DOT to determine whether these absolute standards barring employment were still appropriate and necessary.

FMCSA decided to keep people on the roads, to keep good people working. Monocular (one-eyed) drivers have been working in intrastate commerce for years. Some who "slipped through the cracks" have been working in interstate commerce. So have deaf drivers and insulin-dependent diabetics. Recent tougher enforcement of FMCSA certification regulations at the state level was threatening these drivers with the loss of their jobs. This circumstance -- taken together with the congressional directive to study the situation -- led FMCSA to embark on a proactive "waiver study."

The first part of the study began in July 1992 and allowed a sample of drivers to waive the vision standard if certain conditions were met. These conditions included a clean driving record as a motor carrier, at least 20-40 vision in their better eye, and a doctor's report stating that this driver has sufficient vision to drive a commercial vehicle. The study ended in March 1996. Most of the drivers selected for inclusion in the vision study were grandfathered into the general driving population and are being monitored to ensure that these exceptions to the standard are in the public interest (i.e., they provide employment opportunities for those who would otherwise be denied employment) and pose no adverse impact to public safety. Following the enactment of the Transportation Equity Act for the 21st Century, which changed FMCSA's authority to issue waivers and exemptions, FMCSA began considering all requests for exemptions from the vision requirements in the Federal Motor Carrier Safety Regulations. To date, the findings from all the waiver programs indicate that the waived or exempted drivers do not present an excessive risk on the Nation's roads.

Cruise Ship Access:

There have been a few administrative complaints filed with federal agencies, and law suits alleging lack of accessibility of cruise ships to people with disabilities, especially those who are blind or have mobility impairments. Federal agencies, including DOT, DOJ and the Access Board are now addressing the issue of accessibility of cruise ships and other passenger vessels.

Solutions:

United States Coast Guard (USCG):

The USCG participated on the Access Board's Passenger Vessel Access Advisory Committee (PVAAC). The USCG served as technical advisors to the committee. The committee's report to the Access Board, issued in November 2000, contains detailed recommendations for accessibility guidelines for the design, new construction, and alteration of passenger vessels. The Access Board is currently developing proposed passenger vessel accessibility guidelines. The DOT will follow the Federal rulemaking process to adopt into Department regulations the passenger vessel accessibility

guidelines issued by the Access Board.

These recommendations will assist the Board in developing a rule under the ADA, which will propose accessibility guidelines for the design, new construction and alteration of passenger vessels. Any proposed rule concerning passenger vessel access will be made through the federal rulemaking process. During its deliberations, the Access Board will receive input from the Department of Justice because a representative from the Department of Justice serves on the Access Board. The PVAAC's recommendations to the Access Board are background material and are not part of any rulemaking. The PVAAC report should provide an early opportunity to study and comment on the recommended accessibility guidelines before regulations are issued.

Traffic Signals:

DOT has heard concerns from blind and low vision advocacy organizations that its guidance on pedestrian traffic signals does not sufficiently address their needs.

Solutions:

Federal Highway Administration:

The Manual on Uniform Traffic Control Devices (MUTCD) was first published in 1935, and provides standards and guidelines for traffic control devices such as signs, signals, markings and devices placed on, over or adjacent to a street or a highway by authority of a public body that has jurisdiction to regulate, warn or guide traffic. Uniform traffic control devices help ensure highway safety by providing for the orderly and predictable movement of all traffic, motorized and non-motorized, throughout the nation. The new MUTCD, published in December 2000, included language to allow, on an optional basis, the use of "accessible pedestrian signals". The MUTCD sets the standards for design and operation of the accessible ped devices, if a jurisdiction decides to install them. Federal Highway Administration staff work on the MUTCD.

A Federal Register document was published on May 17, 2001, to propose revisions to Sections of the MUTCD in response to letters FHWA received from organizations representing the blind community and the practicing community of state and local traffic engineers. Use of accessible pedestrian signals remains optional in the MUTCD. The Access Board is now developing guidelines for accessible public rights-of-way that may include guidelines for accessible pedestrian signals. However, given the cost issues to State and local jurisdictions, the end result of the regulatory process is not known now.

Individual jurisdictions are moving ahead in this area. For example, the Alexandria (Virginia) Commission on Persons With Disabilities and the City of Alexandria are working on a pilot program to purchase, program, install, monitor, and evaluate audible pedestrian traffic signals at several intersections throughout the City.

VIII. What steps is DOT taking to lower or eliminate these barriers?

[The responses to Question 6 are keyed to the issues identified in Question 5, with the issue followed by the DOT component with responsibility for dealing with the issue.]

New Freedom Initiative:

Secretary Norman Y. Mineta will work with Congress for the passage of President Bush's New Freedom Initiative, to provide \$145 million to fund innovative projects to help people with disabilities obtain much needed access to jobs and community resources. The New Freedom Initiative will build on the success of the ADA by providing competitive grants to expand transportation mobility options available for people with disabilities. The initiative is composed of a proposed \$45 million grant to fund 10 pilot projects in both urban and rural areas run by state or local governments that promote innovative transportation solutions to people with disabilities. The initiative also includes a proposed \$100 million competitive matching grant program to help integrate people with disabilities into the workplace by promoting alternative methods of transportation provided by community-based and other public transportation providers.

The New Freedom Initiative provides additional tools to overcome barriers facing Americans with disabilities who seek integration into the workforce and full participation in society. This includes \$100 million for nationally competitive projects to develop new services to help persons with disabilities reach employment and \$45 million for 10 to 20 pilot projects to develop and implement innovative strategies to overcome remaining transportation barriers facing people with disabilities. FTA has developed an internal working group to develop these programs. OST, FHWA and others participate. Consultation with disability groups and other federal agencies has taken place to discuss the development and implementation of the transportation component.

The New Freedom Initiative is intended to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the workforce and full participation in society. The Department is seeking an authorization of \$145 million in FY 2003 for the transportation component of New Freedom Initiative. This component consists of two programs: 1) a competitive grants program will make \$100

million available for alternative transportation provided by community-based organizations and other providers to integrate persons with disabilities into the workplace; 2) a pilot project program will make \$45 million available for innovative approaches to overcoming transportation barriers faced by persons with disabilities.

FTA's NFI program provides opportunities to develop and showcase alternatives that are market-based, and started with a minimum of federal seed money. There is a need to develop coordinated one-stop information centers for persons with disabilities. FTA's NFI program provides the opportunity to develop new human services transportation, and make various federal agencies' program work together more efficiently. Currently, HHS spends about \$4 billion per year in human services medical transportation. Even a small percentage savings at the margin of this program could result in large absolute dollar savings. The program will expand the transportation mobility options available to persons with disabilities beyond the minimum required under the Americans with Disabilities Act of 1990 (ADA). It will provide additional transportation services to connect persons with disabilities to jobs. The program will enhance the role of non-traditional transportation providers such as faith-based organizations, to increase the supply of transportation services. It will increase the direct involvement of the disability community and human service agencies in identifying unmet transportation needs and developing solutions.

The ADA addresses issues of *accessibility*, i.e., getting on the bus. The New Freedom Initiative is intended to go one step further and address the issues of *mobility*, i.e., when there is no bus to get on. While the Department is a leader in lowering barriers to accessibility to transportation services and infrastructure, more can be done, and the NFI program can provide the creative approaches necessary to fill some of the remaining gaps. The ADA is essentially a civil rights law, which is undoubtedly necessary, but it itself does not provide grant funding to fill the identified needs.

Project Action:

In addition to its ADA enforcement and New Freedom Initiatives roles, FTA also provides substantial funds to Project Action of Easter Seals, which provides technical assistance and training to transportation providers to assist them in serving customers with disabilities. In 1988 Congress established Easter Seals Project ACTION (ESPA), to improve access to transportation services for people with disabilities and to promote cooperation between the disability community and the transit industry through funds appropriated in the FTA annual budget. Easter Seals Project ACTION has worked with the transit industry, FTA and other Department of Transportation modal administrations to increase the sensitivity and responsiveness to the disability community issues and to define, focus and articulate their concerns to transportation policymakers and organizations. TEA-21 authorizes an annual appropriation of \$3 million to ESPA.

Research:

FTA also funds research, such as “Improving Bus Accessibility Systems for Persons with Sensory and Cognitive Impairments.”

Other Issues DOT is Working on Proactively:

Adapted Vehicles:

National Highway Traffic Safety Administration (NHTSA):

NHTSA is the DOT component with the authority to regulate the manufacture of automotive adaptive equipment and modified vehicles used by persons with disabilities.

NHTSA has solicited input from people with disabilities on their experiences with adaptive equipment and modified vehicles to guide their research projects and help them identify areas where people may be having problems. Many people with disabilities need specific types of modifications made to and/or adaptive equipment added to their motor vehicles to meet their transportation needs. NHTSA is working on estimating the size of the population of vehicles adapted specifically for transporting persons with disabilities, as it is not presently known how many vehicles have such adaptations.

NHTSA is also interested in the safety of vehicles with adaptive equipment. Most motor vehicle modifications to accommodate the use of the vehicle by persons with disabilities, either as a driver or a passenger, are made "aftermarket", i.e., adaptations to the vehicle are made after the vehicle is purchased from the original manufacturer. The motor vehicle modification and adaptive equipment industry is a small segment of the overall automotive market. Most of the businesses in the vehicle modification and adaptive equipment industry are small ones, made up of alterers (manufacturers of vehicles certified to the Federal Motor Vehicle Safety Standards), manufacturers of adaptive equipment, and "aftermarket" vehicle modifiers. Three of the major U. S. automotive manufacturers, Ford, Daimler-Chrysler, and General Motors, also offer "rebates" or reimbursements to vehicle owners for a portion of the cost of adaptive equipment modifications for persons with disabilities. Disabled veterans are eligible for financial assistance from the VA to help defray the cost of their vehicle modifications. The adaptive equipment modification businesses are advised by occupational therapists, specialized driver trainers and vocational rehabilitation specialists on what equipment and vehicle modifications are necessary to meet the transportation needs of an individual with a disability.

Industry members, including the National Mobility Equipment Dealers Association (NMEDA, a professional association composed of vehicle alterers, modifiers, equipment manufacturers, occupational therapists, and driver trainers) and members of the disabled community have urged NHTSA to issue clearer guidance in the area of modifying vehicles for the individuals with disabilities. While NHTSA believes that all individuals should, to the extent possible, be provided with an equivalent level of vehicle safety, it also believes that all Americans should, to the extent possible, be provided with an equivalent level of mobility. Vehicles must often be modified to make them accessible to and usable by people with disabilities. These modifications often make features installed in compliance with the standards inoperative. Among persons with disabilities, the type and severity of physical impairments that affect a person's ability to access and use a vehicle vary from person to person. Different impairments require different vehicle modifications.

NHTSA has required manufacturers to recall adaptive equipment, investigated complaints about a modified vehicle and a hand control, participated in outside research groups concerned with modified vehicles and adaptive equipment, and researched air bag interaction with, and injury potential from, steering control devices. NHTSA will continue ongoing research on safety implications of motor vehicles that have been modified to meet the needs of people with disabilities, following successful publication of a brochure on purchase of adapted vehicles. In addition, NHTSA is considering proposals to establish two new safety standards for motor vehicles: first, an equipment standard specifying requirements for platform lifts, and, second, a vehicle standard for all vehicles equipped with lifts. The proposal would regulate platform lifts installed on all motor vehicles, including over-the-road buses, school buses, and multi-purpose vehicles and would impose additional interlock requirements, improved wheelchair retention and platform slip resistance tests, and, in some instances, lesser compliance standards for lifts installed on vehicles typically used solely for private transport. NHTSA seeks to accommodate the mobility needs of people with disabilities, while preserving safety to the extent possible.

Airport Accessibility; Pilot Eligibility:

Federal Aviation Administration (FAA):

The FAA, Office of Civil Rights takes an active role in ensuring that commercial service airports adhere to the standards in Department of Justice regulation 28 CFR Part 27 by reviewing airport transition plans that set forth the steps necessary to achieve accessibility for people with disabilities.

Improved diagnosis and treatment have made it possible for many pilots to receive special medical certification despite conditions-including heart disease, Hodgkin's

disease, lymphoma, and leukemia-that once would have precluded them from obtaining approval. The policy of the FAA is that "airmen with a history or clinical diagnosis of any medical condition [may] be granted discretionary medical certification through...special issuance provisions if it [is] determined that, notwithstanding the person's failure to meet the applicable medical standard, pilot duties [can] be performed, with appropriate limitations on conditions, without endangering public safety." In its 1994 proposal to revise the medical certification procedures and standards for pilots, the FAA said, "Overall, the safety record of pilots who were granted exemption has been at least as good as that of the general population of airmen who hold medical certificates issued under the medical standards." Revised medical standards that went into effect in September 1996 eliminated some outdated requirements for vision and hearing to obtain certification, and a separate policy change issued in December 1996 ended the absolute ban on pilots with insulin-treated diabetes mellitus (applies to third-class medical certification applicants only). But regulatory changes aside, improved understanding, diagnosis and treatment of medical disorders has enabled the FAA to expand the scope of discretionary issuances of medical certification to pilots who have potentially disqualifying conditions. The Federal Air Surgeon's central concern whether the pilot can, despite certain medical conditions, safely operate an aircraft without causing harm to him/herself or other persons, or damage to the aircraft or other property. For the vast majority of those who enjoy relatively good health and want to fly, medical certification is possible.

Assistant Secretary for Transportation Policy:

The Assistant Secretary for Transportation Policy represents DOT on the United States Architectural and Transportation Barriers Compliance Board (Access Board). DOT incorporates accessibility guidelines developed by the Access Board for transportation facilities and vehicles. The Attorney General has the authority to issue regulations to implement the relevant statutory provisions. DOT implements Title II, subtitle B of the ADA, which applies to accessible vehicles - not to public-rights-of-way. DOT enforces those accessibility standards.

Currently DOT is working with the Access Board and the American National Standards Institute (ANSI) in developing rules to propose accessibility guidelines for the design, new construction, and alteration of public rights-of-way (sidewalks, street crossings, and related pedestrian facilities) and passenger vessels.

Coordination of Federal Agency Efforts on Human Services Access:

DOT/HHS Council on Access and Mobility:

As human services programs were established throughout the U.S. during the past 30 years, it became apparent that access was essential to the success of the programs. The programs were serving many families and individuals who did not have reliable transportation or any private transportation at all. Therefore, some alternative means of transportation was needed, to either transport the clients to programs, or bring the program to clients. The easiest and quickest way to address this problem was to create a new transportation service. The net result was the proliferation of parallel transportation networks in many communities. As long as adequate funding was available, many of the individual programs operated effectively. Through the 1980s and >90s however, funding levels for many human services programs were reduced. In response, many agencies necessarily concentrated their resources on direct support of their clients, not on support programs like transportation. Some agencies reduced or eliminated transportation services, and coordination with other agencies was not thought of. ("A Model for Solving Rural Transportation Issues," Community Transportation Association of America, n.d.)

One of the issues is the overlap of the many different human services transportation providers, and the high cost of providing human services transportation by providers other than public transit. Many human services agencies buy vans to transport clients, including those with disabilities, to and from services. These agencies rarely coordinate with transportation entities that provide related transportation services, such as paratransit. Human services vans sometimes sit idly for extended periods of time, while people with disabilities in the same community have difficulty accessing public transportation. Coordination efforts seek to eliminate inefficiencies such as these in current transportation systems by promoting initiatives such as agreements between urban and rural providers to pick up passengers in each other's areas when logical to do so.

In addition to different funding sources and organizational barriers, other obstacles to coordination (or decrease of overlap) include questions of liability for injury, and potential user disinterest. Brownfields programs (contaminated former industrial sites that are developed and reused to spur local economic development through federal, states, and local cooperation) have solved somewhat similar liability questions, so a model exists to study for human services transportation liability. Current non-transit human services transportation users might not want to give up their means of transportation, especially when those means are heavily subsidized, their cost is borne by third parties, and the service is individualized and door-to-door.

The benefits of successful coordinated transportation systems often include providing greater access to funding, creating a more cost-effective use of resources, including

reduced duplication and overlap in human service agency transportation services; filling service gaps in a community or geographic area; serving additional individuals within existing budgets; and providing more centralized management of existing resources. The DOT/HHS Council has been in existence since 1986, and has been the subject of Congressional and GAO study. On DOT's side, this effort has been led by the Federal Transit Administration. Issues which would be useful to discuss include possible legislative changes to make more efficiencies possible. Legislation might be necessary to pare down the many types of grants for the same purpose, to require coordination on a local level, and to help ensure that cost savings will redound to the benefit of local people. There are also potential new partners in local areas and on the federal interagency level. These include public school district school bus fleets, and fleets of vehicles belonging to faith-based organizations. In involving the latter, the White House and HHS Faith-based and Community Initiatives Offices might have a role. Possible federal partners include the Departments of Education, Housing and Urban Development, and Labor.

DOT and the HHS are both interested in, and take responsibility for, assisting transportation services for persons who are disadvantaged in terms of their ability to obtain and use their own transportation. Such persons may include the elderly, persons with disabilities or with low or limited incomes, the young, and others without access to private automobiles. Many of these persons need specialized transportation to access the human service programs funded by HHS. The Council, jointly staffed by DOT and HHS, was first established in 1986. The Council's goals include increasing the cost-effectiveness of resources used for specialized and human service transportation and increasing access to these services. Pooling of existing resources is one of the least developed areas with potential for significant improvement in accessibility in transportation. To some extent, the DOT/HHS Council is working on this problem. Fleets of vehicles of varying accessibility stand unused for much of the day and week. These include, as mentioned elsewhere, school buses, church vans and buses, Administration on Aging-funded vans, and Medicaid-funded vehicles. Legislative changes to make restrictions on use more flexible and creation of liability and insurance safe harbors may be necessary to make such pooling of resources financially and legally practical.

In the past, the Council has issued general guidance on the benefits of coordination, published a Best Practices Manual and worked to remove real and perceived Federal barriers to transportation coordination. Recently, the Council developed a new strategic plan and published Planning Guidelines for Coordination. It also promoted local collaborative efforts in the development of Area-wide Job Access Plans by states and localities to help transport low income and welfare individuals to jobs. The Council will soon be reconstituted with new members from both Departments. It is expected that Council will review its strategic goals, but at a minimum, will continue to seek ways to disseminate information on coordination to a wide audience and focus on remaining federal rules and regulations that may impede coordination. The Council is also

expected to promote the same type of local collaboration under the New Freedom Initiative that has worked for the Federal Transit Administration's Job Access and Reverse Commute Program. The Council's activities to promote coordination directly benefit disabled individuals, since improvements in transportation coordination at the local level usually result in higher levels of bus and paratransit services.

IX. What future actions does USDOT plan to take to address these barriers?

[See the discussion earlier in this paper about DOT's part in the President's New Freedom Initiative.]

Working with the Department of Health and Human Services to **revitalize the DOT/HHS Council on Access and Mobility.**

Considering the issuance of a Notice of Proposed Rulemaking that will **propose requiring air carriers to file with DOT detailed information on the disability-related complaints they receive**, to be used for enforcement, educational, and other relevant purposes by DOT, disabled air travelers, and Congress. DOT is considering issuance of an NPRM on the reporting requirements in the near future. If the NPRM is finalized and carriers begin to submit this data, DOT proposed to it to track trends and spot areas of concern that may warrant further action. DOT proposes to make the complaint data available to Congress, the aviation industry, the media and the general public so that both consumers and air travel companies can compare the disability-related complaint records of individual airlines. The data may also be useful as a research tool. DOT continues to be committed to increased access to people with disabilities on airlines, and has, for example, issued guidance on the effects of increased security measures on people with disabilities.

Considering the issuance of a Notice of Proposed Rulemaking proposing to **amend DOT's ACAA regulation to cover foreign air carriers operating to and from the United States** or code sharing with U.S. carriers. DOT hope to issue an NPRM in the near future.

Working on proposals to **establish two new safety standards for motor vehicles**: first, an equipment standard specifying requirements for platform lifts, and, second, a vehicle standard for all vehicles equipped with lifts. The proposal would regulate platform lifts installed on all motor vehicles, including over-the-road buses, school buses, and multi-purpose vehicles and would impose additional interlock requirements, improved wheelchair retention and platform slip resistance tests, and, in some instances, lesser compliance standards for lifts installed on vehicles typically used

solely for private transport.

Developing with the National Council on Disability on the **ACAA outreach plan** mandated by AIR-21. DOT is currently awaiting funding to fully implement the plan. As discussed above, forums have been sponsored with airline industry representatives and disability advocates to discuss concerns and concrete measures. These forums were temporarily postponed as a result of attention necessary to post-September 11, 2001, security and nondiscrimination needs. A second forum is planned for January 29, 2001.

The Department's Bureau of Transportation Statistics is considering **conducting a survey of people with disabilities to determine their views of the accessibility of transportation** in their lives. Part of the planning for this survey includes focus groups with DOT employees with disabilities to help determine the best way to reach and get responses from people with disabilities, working DOT's Disability Resource Center's Disability Policy Analyst, and working with HHS on available data on people with disabilities.

Considering sponsoring, with the Department of Labor, a **conference on transportation and employment**. The forum would be to discuss best practices for integrating transportation into employment service network, and how DOT programs, including the NFI Transportation Initiative might be implemented to serve the needs of DOL programs and clients.

Intelligent Transportation Systems (ITS) involve the use of high technology and electronic equipment and approaches to transportation applications. There have been several operational tests in DOT's ITS program focused on the issue of employment transportation issues for disabled adults. Tests have been conducted in Sweetwater County Wyoming, the Florida Commission for the Transportation Disadvantaged, Santa Clara County California, Winston-Salem North Carolina , and in Northern Virginia for the Potomac and Rappahannock Transportation Commission. These tests have shown the applicability of ITS fleet management and mobility management systems to the disabled community. The Florida test covered a three county area which provides approximately fifteen percent (34,000) of the trips state-wide provided by this agency to get disabled adults to the workplace. In addition the agency provided trips for training and educational services in these counties. Not only did the use of ITS technologies prove effective but the costs of providing these rides was reduced.

The technologies used in delivering these services in the above-listed operational tests include global positioning satellite-based (GPS), automated vehicle location (AVL), real-time scheduling software, geographic information system (GIS) mapping, and digital communication through mobile data terminals. The tests run the gamut of various fixed route, paratransit and route deviation services and coordination activities

in both urban and rural environments. ITS technologies are being encouraged in the FTA Access to Jobs Program and further research is being conducted to determine the most effective ways of implementing and using technology by agencies providing these services. The results of this research will provide guidelines and best practice information to agencies involved in these transportation services. It will encourage the use of technology as a cost effective delivery mechanism.

Electronic toll collection is rapidly on its way to widespread implementation. This technology means that, instead of cars stopping at toll booths and drivers tossing coins or tokens into a bin, tolls will be collected through some variation of an electronic debit card system. The general advantages of this practice are obvious -- less traffic, less hassle, less inconvenience. But on the ADA side of the issue, there are many thousands of people throughout the United States with upper body disabilities who simply cannot reach toll booths -- people for whom driving on a toll road is at best an embarrassing experience or at worst an impossibility. Here is an example of technology obliterating the need for detailed regulation. In the next century, rather than prescribe mandatory heights for toll booths and ticketing machines, everyone will have easy and open access via an "electronic highway."

X. What recommendations does USDOT have for actions that USDOT cannot take unilaterally (such as revisions to statutes, interagency cooperation, private sector actions, unregulated sector actions, etc.)

Universal Design

Transportation infrastructure elements which accommodate all people through their life span can be achieved through the application of universal design principles in all phases of the environmental design process including programming, conceptual design, plan development, product specification, and design documentation. Transportation plans and projects should incorporate information about the variety of infrastructure users and their abilities. People with disabilities and older people can be expected to be among employees, customers, and passengers on a transportation mode.

Rental cars

Rental cars are an important part of U.S. transportation infrastructure, especially for business travelers and vacationers. Many cars are rented at airports. Rental car companies are public accommodations, as defined in the ADA. Consequently, they

have an obligation to remove architectural barriers to access in existing facilities and transportation barriers in existing vehicles, when such barrier removal is readily achievable. The Department of Justice, following an investigation, concluded that a major rental car company was in violation of certain of the provisions of the ADA relating to (i) the acquisition of accessible airport shuttle vehicles, (ii) the provision of curbside service to individuals who use wheelchairs, (iii) the existence of architectural barriers that should have been removed under the company's obligation to engage in readily achievable barrier removal, and (iv) the provision of effective communication for individuals who are deaf or hard of hearing. The company and DOJ resolved the matter without resort to litigation, by the company taking such actions as refurbishing the shuttle vehicles and equipping them with wheelchair lifts. This settlement has become a model for other rental car companies, and can be extended across the U.S.

Modifying the Environment

Disability is the interaction between the disabling conditions of an individual and the environment, and therefore strategies that affect either the environment or the disabling conditions can affect disability. The amount of disability that a person experiences is a function of the interaction between the person and the environment. One of the contributions of engineering to rehabilitation science and engineering is within the realm of creating altered, supportive environments (external or internal) for people with disabling conditions. These engineered environments limit or reverse the functional manifestations of pathology and organ impairment by compensating for or replacing the altered or lost function with engineered structures and devices.

Whether or not a particular physical condition is disabling to a particular individual depends on the natural and built environments, the culture of a society or the subculture of a group, the political, economic, or familial structures of a society, and the intrapersonal processes of an individual. Providing the physical and social environmental adaptations and supports that a person with a potentially disabling condition needs can often ameliorate those conditions and facilitate full participation in society. Universal design and universal engineering of environments and equipment to meet the physical needs of a wide range of abilities clearly has many advantages.

One approach to reduce the problems associated with independent travel has involved modification of the environment to eliminate unnecessary hazards or environmental demands, to provide devices to aid in wayfinding and to provide training to the individual with a visual disability.

Curb Cuts and Bus Stops

FTA believes that many bus stops are inaccessible because of a lack of curb cuts, and because of inaccessible sidewalks. The Transportation Cooperative Research Program (TCRP) in its Report 19, "Guidelines for the Location and Design of Bus Stops," stated, "Making new stops conform to ADA physical dimension requirements is relatively easy...Modification of existing stops is more difficult, especially if the stops are at sites with limited easement or not subject to the transit agency's control, such as shopping malls, on state rights-of-way, or suburban subdivisions...The ADA...involves accessibility from the point of origin to the final destination...to get to the bus stop, individuals with limited mobility or vision need a path that is free of obstacles, as well as a final destination that is accessible. A barrier-free bus stop or shelter is of little value if the final destination is not accessible...an accessible vehicle is clearly a critical link in the barrier-free trip. Full accessibility is more difficult to achieve when different organizations are responsible for different portions of the path."

Planning and Mainstreaming

Accessibility is often considered a separate issue or is the afterthought of a program or project. It is essential that it be incorporated into the first phases of programming, planning, designing, operating, and constructing pedestrian facilities. To do this, accessibility needs to be institutionalized throughout all functions that affect the usability of the pedestrian system. Accessibility should not be an "added feature" or afterthought of programs and projects. Problems are created when there is a lack of planning for accessibility in the initial stages of planning and project development. Inadequate funding, poor design and lack of right-of-way are examples of problems that stem from adding pedestrian facilities at the last minute. Then a substantial percent of the population may not be provided with the mobility services that the nondisabled population takes for granted. Many organizations are not aware of disability prevalence statistics, or possibly the figures do not have sufficient meaning when mainstreaming of the population with disabilities into the general pedestrian transportation system does not occur. The connection between the lack of pedestrian service and the lack of pedestrians is often a misunderstood connection within transportation agencies. Making these changes and creating awareness can be difficult within bureaucracies.

Transportation Concerns as Part of Community Assessment and Transition Plans

When assisting an individual with transition to the community, it is important to address transportation concerns as part of the initial community assessment and transition plan.

In addition, it is important for legislative and regulatory initiatives to provide adequate resources to address a continuum of accessible transportation options. During the transition, it is important to conduct an environmental assessment as well as a functional skill assessment for the individual. These two pieces of information will help determine if the individual is a candidate to learn the necessary skills to use fixed route transportation services.

Custom Modifications/Adapted Private Vehicles

Private cars provide their owners with many private mobility benefits, including the following:

- § the convenience of traveling whenever they want
- § the flexibility of traveling wherever they want, and the ability to change their destinations easily
- § comfort, privacy and the ability to travel alone or with people of their choosing.

In addition, the car has often been associated with status, independence, and a feeling of freedom. These mobility and other benefits have jointly underpinned the popularity of the car, and its dominance of urban, suburban, and rural transportation systems around the world.

After-market adaptation of automobiles (particularly vans) for use by drivers with physical impairments is being facilitated. As more standards are developed through cooperative efforts by auto manufacturers, adaptive specialists, and consumers, possibilities for help from the auto manufacturers will improve.

Many people with disabilities do not live in areas served by public transportation, and thus rely on private vehicles. Because of the additional expense of adapting a vehicle and the general low level of income of people with disabilities, buying and adapting a car can be difficult. Yet without a car, they are unable to get to a job or otherwise participate in community activities. Special programs, such as tax incentives and public assistance, can be developed to make obtaining and adapting a private vehicle more possible for people with disabilities who cannot reach public transportation.

Communications Among the Parties

Communications among the disability community, transportation providers, infrastructure and industry members, and government can be encouraged and reinforced. This would require personal and professional commitments from many individual and organizational stakeholders. It would also require public sector efforts aimed at fostering communication and partnerships. Local programs have both persons with disabilities and representatives

of transportation infrastructure in their constituencies, but need to facilitate effective linkages. Government, in addition to its regulatory and funding role, is especially effective at convening various parties to discuss issues.

Self-Advocacy

Many opportunities exist, and are taken advantage of by people with disabilities, for advocating for themselves in the area of increasing transportation accessibility. These opportunities include filing administrative complaints and law suits with local and federal agencies; working on advisory committees to such groups as the Access Board, transit providers, and metropolitan planning organizations; and direct action such as that carried by groups such as ADAPT. Another example is the Self Advocacy Guide developed with assistance from the Federal Transit Act, through a Cooperative Agreement with DOT, the Federal Transit Administration, and Project ACTION of the National Easter Seal Society.

Travel Training & Mobility Outreach

Mobility is a learned skill, and people with disabilities first need to become aware of their ability to move about their environment. Although this process has been slow in the past, it is making progress through the various accessibility factors mentioned in this report, and others, such as improved electric wheelchairs. It will probably be necessary for transportation and social service organizations to reach out to individuals with disabilities to encourage them to undertake the necessary training. This outreach would be the transportation equivalent of the “childfind” requirements in the Individuals with Disabilities in Education Act (IDEA) and in the Section 504 (of the Rehabilitation Act of 1973) Education Department regulations. Public schools are required to affirmatively find young children with disabilities and see that they are screened and evaluated to determine their need for special education services. Similarly, ensuring that all people with disabilities know about and are taught transportation skills would decrease their dependence, increase their mobility, add to their economic contribution to society, and increase the customer base for transportation services. This concept of outreach is different from the more passive concept of meeting the established and known transportation needs of people with disabilities, who have brought their needs to the attention of transportation providers.

Travel training is a term typically used when referring to independent travel instruction for individuals with cognitive disabilities. Usually, in the case of potential users of transit systems, potential riders are provided extensive hands-on door-to-door training in using transit. The objective is to provide skills needed to use available transportation services. The desire to travel independently is the single most important factor in travel training success. This drive to succeed keeps many trainees focused and determined, giving them

the ability to overcome most obstacles.

Accessible Taxicabs

Accessible taxicabs are often operated by companies that offer nonsubsidized service to the general public, and provide subsidized paratransit services under arrangement with a transit authority. Market-based incentives such as tax incentives, accelerated depreciation, and threshold taxi medallion requirements could be used to encourage acquisition by private taxi companies of more accessible taxicabs. Taxi programs are sometimes subsidized through a user-side subsidy. This concept provides riders with a discounted ride on private taxi services. The discount usually takes the form of coupons or vouchers that passengers present to drivers when riding. Some operators automatically provide a discount to eligible riders. The taxi systems are reimbursed by the sponsoring agency for the discounted trip. (“A Model for Solving Rural Transportation Issues,” Community Transportation Association of America, n.d.)

Transportation analysts have argued for many years that deregulating private transport services could increase the total amount of transportation available in a community, and make public transit operations more efficient. The number of vans and jitneys and shared-ride taxis might increase dramatically if sanctions were lifted, since there is evidence that current regulations hold supply below demand. Allowing private operators to provide competition would force existing public transport operators to be more innovative and cost-effective. Would these new services be accessible if they were not required to be? The issue of local transportation monopolies is one of local governance. Perhaps in return for deregulation, the private transport services could be required to be accessible. The cost of a new accessible taxi might be double the present cost per cab, say \$40,000. But this would still be far less than the cost of a taxi medallion in New York City (hundreds of thousands of dollars). To amortize the doubled cost of the accessible taxi, the cost per ride might be doubled. But this would still be far less than the subsidized cost of a ride on a paratransit vehicle, which can run 20 times the cost of a fixed-route bus ride, and five times the cost of a regular taxi ride.

Intelligent Transportation Systems (ITS)

Some of the coordination effects discussed elsewhere in this document can be achieved in part by developing, deploying, and testing programs that use selected information technologies and applications, including automatic vehicle location; vehicle communications; geographical information systems (GIS); computer-aided dispatch and routing; and electronic fare collection, use tracking, and auditing. These technologies can be integrated into a centralized regional control system to manage otherwise independent paratransit operators. Centralized dispatch, monitoring, and fare

collection for regional paratransit services provided by transit properties, Councils on Aging, and human service providers within a single region can be conducted from a regional mobility management center. Costs can be reduced through single vouchering; smart cards; and most efficient routing, scheduling, and vehicle selection.

Technology Transfer

Technology transfer is the transmittal of developed ideas, products, and techniques from a research environment to one of practical application, and as such it is an important component of rehabilitation science and engineering. Opportunities for initiating effective technology transfer activities occur both at the beginning stages of a research project, and at its end. The former involves bringing academic and industrial participants into a research program as partners who then have a stake in the research and who are free to use or market the findings. The latter depends on disseminating the findings of research to the greater industrial, infrastructure, and medical communities. Implementation usually consists of conferences, publications, easily accessed databases, and other means of publicizing the conclusions of research. Many government agencies have programs that are designed to facilitate technology transfer. There is, however, no well-organized mechanism for distributing research findings in accessibility rehabilitation science and engineering to those providing services.

Rural Issues

William C. Field, Director of the Breaking New Ground program at Purdue University, has made the following recommendations about providing rural accessible transportation. Please also see the discussion earlier in this document about the problem of accessible rural transportation.

- § Reserve some accessible transportation system investments for rural areas.
- § Increase resources to rural disability organizations, such as rural independent living centers, to provide transportation services in more isolated areas. These resources would strengthen these organizations and result in leveraging of local resources.
- § Encourage the faith community in rural communities to step in and provide transportation services to at least their members and extended families. There are rural churches with fleets of three to ten buses that sit idle for most of the week.
- § Use the USDA AgrAbility Program to increase public awareness about rural transportation issues.

It has been noted that community structure has a significant impact on service delivery in rural areas. This structure may focus on family and community-level solutions for problems, with solutions occurring primarily between individuals instead of groups. One solution of this type involves forging transportation cooperatives among agencies which have purchased vehicles with federal funds. For example, a senior citizen's program, a mental health center, and a developmental disability service provider could form a cooperative by combining their vehicles and transportation budgets to create a community transportation cooperative serving people with disabilities and not just each agency's clients. However, such an approach requires agreement and cooperation among multiple agencies, which may fear loss of control and income. Further, it requires a community of sufficient size to have at least two agencies with access to accessible vans and that are willing to cooperate.

Data Collection

It has been pointed out by many involved people that there are many definitions of "disability." This creates difficulties in collecting and analyzing data on transportation and people with disabilities. There is relatively little information available about the satisfaction of PWDs with transportation accessibility and availability.

Enforceable Handicapped Parking Placard

[Note: Although current usage dictates the term "disabled" rather than "handicapped," in the sphere of placards for cars, the term handicapped is still that most often used.] Small Business Innovation Research: Development of an Enforceable Handicapped Parking Placard (00-FH13) This project would develop an enforceable handicapped parking placard. Current handicapped parking placards are easy to forge. This makes it difficult for the police to verify their validity. This project is needed to create a handicapped parking placard that is difficult to forge and easy to verify. The project will use technology and concepts that maximize the ability of police to enforce and for Divisions of Motor vehicles to distribute. The technology will incorporate the ability to time limit the usefulness of the handicapped parking placards for people whose handicaps will be of limited duration. Those working on this project should have experience in police enforcement of handicapped parking, experience with how departments of motor vehicles deal with handicapped parking placards, experience with a wide variety of state and local handicapped parking and experience with communications technologies.

New Generation Passenger Aircraft

New generations of commercial passenger aircraft take many years to develop. To help realize full accessibility of the next generation of such aircraft, planning must begin now. It is possible that with new materials and means of propulsion, airliners can be designed to be fully accessible. Changes necessary might include wider aisles, accessible restrooms, and permitting passengers with mobility impairments who use wheelchairs to remain in their own wheelchairs during flights.

The Elderly

To help show that accessibility is a universal good, and garner public support for universal accessibility, the mobility problems of the elderly can be addressed coextensively with the mobility problems of the non-elderly. Many of the mobility problems the elderly experience are similar to those experienced by people with disabilities. Many people will become disabled as they age. Many of the beneficiaries of new-found access under the law are elderly. For example, many holders of “handicap” placards or license plates on their privately owned motor vehicles are elderly. Many of today’s elderly wish to maintain their personal mobility, especially in driving cars, as long as possible. In many cases, this is a necessity, because of the increasing number of elderly who live in suburbs that are not well served by public transportation. People with disabilities desire to have and maintain their personal mobility as well, and want to have choices as to where they can accessibly live. An aging population is an issue for transportation planners because older persons experience travel limitations associated with declining health. In 1990, 16% of the elderly report limited mobility outside the home resulting from chronic health problems. DOT is helping to plan to address transportation problems of the elderly, especially as they desire to remain independent with privately owned and operated vehicles. This planning is accomplished in part through the Assistant Secretary for Transportation Policy and DOT’s Policy Council.

Innovative Funding

Questions about financing accessibility in transportation can be raised at many points along the accessibility continuum, for example, basic research and product development, marketing and distribution systems, infrastructure provider and consumer purchase, maintenance, and post-acquisition support. One would want to expand the pool and availability of funds while allowing potential users the maximum autonomy in identifying their needs and the devices and services that will best meet those needs. Most people with disabilities do not have the private financial resources to simply go out and purchase

the assistive technology they need. Various mechanisms exist by which public policy can facilitate and encourage the availability of funds for the purchase and provision of accessibility aids. Through loan programs, tax incentives, small business development programs, and numerous other means, creative public policy can significantly enhance access to accessible transportation means and devices. Alternative funding mechanisms include public/private partnerships, micro-loans, tax incentives, accelerated depreciation of adapted and accessible vehicles, insurance relief, liability safe havens, and pooling or joint use of resources. Initiatives must also be designed to give the fullest possible scope to the autonomy and self-directed life planning of consumers with disabilities.

Continuum of Transportation Options

Possible strategies for supporting a continuum of transportation options include expanding and supporting a state's ability to support transportation strategies at all levels within Medicare/Medicaid, and enhancing transportation into broad systems change initiatives addressing employment services (i.e., Ticket to Work and Work Incentives Improvement Act, Vocational Rehabilitation Services, etc.)

Voluntarism

When discussing accessible transportation, the assumption is generally that society owes a duty to people with disabilities to provide accessible transportation, to lower barriers to participation, and to provide services. However, the individual has duties also. Some social theorists and elected officials argue that non-governmental associations of individuals not only have duties to assist less-advantaged people in our society, but can also provide that assistance more efficiently than governmental organizations.

Market Forces

Sometimes, relative accessibility is achieved through market forces rather than through regulation. For example, many modern cruise ships are relatively accessible, because the cruise ship companies' clientele is largely elderly, and, as noted elsewhere in this document, share many mobility impairment characteristics with the population we identify as disabled. In addition, newly constructed gambling casinos under the current boom in gaming are largely accessible for the same reason.

Telecommuting (Telework)

(This information is adapted from the website, <http://www.muskie.usm.maine.edu/research/disability/telepg2.html>, "Telecommuting for Persons with Disabilities.")

The Internet has made working at home much more possible than previously. Telework, or telecommuting, uses electronic communications to substitute for vehicle travel. It means that employers allow employees who meet certain qualifications to work at home or at a local telework station (an office located in residential and other types of neighborhoods where employees can work rather than going to a central office) usually on a part-time basis. It can also include telelearning (classes taught from a distance using electronic communications), and Internet services that avoid the need to travel for errands such as shopping, banking, and research.

Successful telecommuting arrangements for persons with disabilities will demand similar, if not identical, organizational and personal conditions required for successful projects involving non-disabled individuals. It is difficult to imagine successful telecommuting for persons with disabilities which did not include these conditions also. There may also be unique aspects of telecommuting for persons with disabilities that may arise in structuring a project or work arrangement. First, some individuals with disabilities will need not only more specialized adaptive aids, but also modifications to work areas within their residences. Private and public organizations must be ready to financially support these modifications.

There is a concern among some disability advocates that telecommuting may result in segregation of persons with disabilities, rather than integration and mainstreaming.

XI. Specific Interagency Opportunities

DOT/HHS Mobility and Access Council (see above), with new partners, Department of Education and HUD.

HUD/DOJ/DOT joint efforts on curb cuts. DOJ is willing to step up existing coordination efforts with DOT as necessary to address this issue. DOJ is willing to work collaboratively with DOT to develop a list of criteria that would assist DOT in determining when it is appropriate to refer unresolved curb cut complaints to DOJ for litigation consideration. Only the most initial contacts have been made with HUD. At this time, DOT envisions a cooperative effort involving the three agencies, with

guidance being issued by HUD to its recipients, DOT issuing new guidance based on new pedestrian access standards, surveys, compliance reviews, and enforcement.

DOT/DOJ joint efforts on paratransit enforcement: DOJ is willing to work collaboratively with DOT to develop a list of criteria that would assist DOT in determining when it is appropriate to refer unresolved paratransit complaints to DOJ for litigation consideration.

HUD/DOT efforts on housing location and curb cuts. City governments are generally responsible for providing accessible circulation paths, and receive substantial federal financial assistance from the HUD.

DOL/DOT efforts on job access transportation.

FEMA/Access Board/GSA/OPM/EEOC/Presidential Task Force on Employment of Adults with Disabilities/DOT opportunities on emergency management and people with disabilities.

Access Board:

DOT is one of the twelve Federal members of the United States Architectural and Transportation Barriers Compliance Board (Access Board). DOT incorporates accessibility guidelines developed by the Access Board for transportation facilities and vehicles. It enforces those accessibility standards. Currently DOT is working with the Access Board in developing rules to propose accessibility guidelines for the design, new construction, and alteration of public rights-of-way (sidewalks, street crossings, and related pedestrian facilities) and passenger vessels. The Attorney General has the authority to issue regulations to implement those statutory provisions. DOT implements Title II, subtitle B, which applies to accessible vehicles - not to public-rights-of-way.

Rural Task Force:

The Department of Health and Human Services has created a Rural Task Force to conduct a department wide examination of how HHS programs can be strengthened to better serve rural communities. The Task Force, assigned to report its findings to HHS Secretary Thompson by October 25, 2002, has asked for and received public comments on programs serving rural communities. To date comments received by HHS have identified the lack of transportation (especially for people with disabilities) as a major obstacle in the delivery of HHS programs in rural areas. In response to these comments HHS and DOT have initiated discussions to determine how they can jointly address the identified problem.

Interagency Committee on Disability Research (ICDR)

DOT is a member of this research coordination body.

National Science and Technology Council:

In November 1998, the Subcommittee on Transportation Research and Development (R&D) of the National Science and Technology Council (NSTC) released the first Federal Transportation Technology Plan. This plan presents initial implementation strategies for the private- public partnerships identified in the 1997 NSTC Transportation Science and Technology Strategy. Among these partnerships, that on "Accessibility for Aging and Transportation-Disadvantaged Populations" addresses the accessibility and mobility needs of the elderly, the poor, and persons with disabilities. As stated in the NSTC's *Transportation Technology Plan*, this initiative's vision is "a transportation system that meets the mobility and accessibility needs of the elderly, the poor, persons with disabilities, and all other Americans without access to a private automobile." Its ultimate goals are to (1) create transportation systems that serve the needs of older and transportation-disadvantaged people while taking full advantage of existing services, resources, and development patterns; (2) promote development of transit-compatible communities; and (3) expand opportunity by preserving communities and enhancing transit. Possible measures of success in attaining these goals include the accelerated introduction of new technologies and services, improved effectiveness of services by measure of integration with other critical services, and the initiation of new interagency research, development, and technology programs

Partners will coordinate and integrate Federal agencies' efforts to optimize existing transit and paratransit services. Second, they will incorporate state, local, and private efforts and develop innovative transportation alternatives.

The DOT partners in this initiative include the Office of the Secretary (OST), Federal Transit Administration (FTA), Federal Highway Administration (FHWA), National Highway Traffic Safety Administration (NHTSA), Research and Special Programs Administration (RSPA), and Intelligent Transportation Systems (ITS) Joint Program Office. Other Federal partners are the Department of Health and Human Services (HHS), Department of Housing and Urban Development (HUD), and Environmental Protection Agency (EPA).

Among the current and potential non-Federal partners are state, local, and tribal agencies; Metropolitan Planning Organizations (MPOs); Area Agencies on Aging; housing authorities; associations (American Public Transit Association, Community Transportation Association of America, National Association of Housing and Redevelopment Officials, National Association of Regional Councils, National Governors' Association); the private sector (information and communication system

vendors, transit providers, employers); nongovernmental organizations and foundations (AAA Foundation for Traffic Safety, Easter Seals, Eno Transportation Foundation); and universities.

National Aeronautics and Space Administration:

NASA Aviation Research

NASA is performing long-range research to make air transportation more accessible and less expensive. In particular, NASA is developing technology that will extend general aviation and civil tiltrotor service to rural areas, making air transportation more available and affordable in these communities.

Internal Revenue Service/Treasury Department:

Possible collaboration on tax incentives for accessible taxi-cabs.

White House Office of Faith-Based and Community Initiatives:

Many faith-based institutions possess fleets of vehicles, which are used only on Sundays and for out-of-town trips. These institutions could be encouraged to make their fleets accessible and available for other human services purposes.

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