



U.S. Department
of Transportation

**Urban Mass
Transportation
Administration**

TECHNICAL ASSISTANCE AND SAFETY PROGRAMS

FISCAL YEAR 1989 PROJECT DIRECTORY

January 1990

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16. Abstract This Directory contains brief descriptions of Technical Assistance and Safety Projects initiated during Fiscal Year 1989 by the Office of Technical Assistance and Safety (UTS), Urban Mass Transportation Administration (UMTA) of the U. S. Department of Transportation. Its purpose is to inform the public and especially the transit industry of the nature and scope of work underway to assist State and local agencies in improving services and reducing the cost of public transportation. Under the Technical Assistance and Safety Program, assistance is provided in a broad range of disciplines, including Suburban Mobility Initiatives, Mobility Enhancement, Public/Private Partnerships, Human Resources Management, Managerial Training Grants, University Research and Training, Rural Transportation, Rail Modernization, Transportation System Initiatives, Safety and Security, and University Transportation Centers.					
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The Administrator

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A MESSAGE FROM THE ADMINISTRATOR

As we enter the last decade of the Twentieth Century, transportation issues are once again in the spotlight, on the National as well as the local stage. And, no wonder. For transportation is quite literally the Nation's circulatory system. It is the lifeblood which determines not only America's present living standard, but our prospects for a healthy future as well.

Perhaps now, more than at any other time in our history, Americans are united in their determination to seriously address transportation issues. These include providing greater mobility, improving air quality, and reducing the economic costs imposed by traffic congestion.

The determination to succeed on these three fronts is the foundation of the Urban Mass Transportation Administration (UMTA) policies and programs, including those in this directory from the Office of Technical Assistance and Safety.

As the projects listed in this directory demonstrate, a growing number of communities are finding innovative, effective ways to meet their transportation challenges: forging alliances between the public and private sectors in the design of policies and programs; forming coalitions that include all segments of the community as active participants; and developing regional strategies to combat congestion.

To pay for transportation programs in this era of fiscal restraint, they are moving beyond traditional approaches. They are combining dedicated local or regional funding with creative financing techniques which include a larger role for the private sector.

The value of these strategies goes beyond their importance to UMTA and the mass transit industry, however. Each of them is also a building block in the foundation of Transportation Secretary Skinner's National Transportation Plan.

This directory will provide you information on UMTA grant programs in the areas of alternative fuels, safety and security, university research, managerial training, suburban mobility, and public/private partnerships. Although each area of emphasis has different short-term objectives, their long-term goals complement one another. All are designed to help communities and transit operators in their efforts to give people the best possible service within available resources.

Brian W. Clymer
Administrator

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INTRODUCTION

This directory contains brief descriptions of Technical Assistance and Safety projects initiated during Fiscal Year 1989 by the Urban Mass Transportation Administration (UMTA) of the U. S. Department of Transportation. Its purpose is to inform the public and especially the transit industry of the nature and scope of work underway to assist State and local agencies in improving services and reducing the cost of public transportation. Under the Technical Assistance and Safety Program, assistance is provided in a broad range of disciplines, including Suburban Mobility Initiatives, Mobility Enhancement, Public/Private Partnerships, Human Resources Management, Managerial Training Grants, University Research and Training, Rural Transportation, Rail Modernization, Transportation System Initiatives, Safety and Security, and University Transportation Centers.

Technical assistance is provided by UMTA primarily in the form of information on, and sponsoring the development and introduction of, improved techniques. Information is disseminated by means of technical reports and by workshops and training courses. In addition to initiating development of new techniques, the Technical Assistance and Safety Program provides funding to help evaluate and introduce techniques and products developed by the private sector. UMTA technical assistance concentrates on seeking broad applications to improve productivity, performance, maintenance, safety, and security.

Another important role of UMTA is facilitating the flow of information on solutions and improvements which have been developed locally and which can be used by a large segment of the transit community. In this capacity, UMTA assists the transit community by serving as a clearinghouse for current information on state-of-the-art and problem solving resources. UMTA also sponsors various activities to expedite effective transfer of knowledge regarding new methods, initiatives, and techniques.

The current Technical Assistance and Safety Program is based on needs and problems expressed by State and local agencies through a number of channels, including conferences and workshops, industry liaison boards, special user advisory groups, and general solicitations. The projects described in this volume are managed by the Associate Administrator for Technical Assistance and Safety. An alphabetical listing of project monitors is provided in Appendix D.

This directory was prepared by the Program Management Staff (UTS-5), Office of Technical Assistance and Safety, Urban Mass Transportation Administration, U.S. Department of Transportation, Washington, D. C. 20590. Copies may be obtained by contacting that office.

All media inquiries about these programs should be directed to the UMTA Office of Public Affairs at the same address, or you may phone 202, 366-4043.

SUBURBAN MOBILITY INITIATIVES PROGRAM

The Suburban Mobility Initiatives Program was established by the Urban Mass Transportation Administration in response to a need to develop solutions to suburban mobility problems.

The objective of this program is to provide assistance to suburban public agencies and nonprofit organizations in their efforts to reduce dependence on, and encourage alternatives to, the use of single occupant vehicles in suburban areas. This program provides funding and technical assistance and support for local activities such as:

- Seminars or forums to identify and discuss local actions addressing mobility problems with transit representatives, planners, developers, employers, and other concerned groups;
- Technical assistance, which can include the evaluation of mobility problems and proposed solutions to these problems;
- Demonstrations of innovative approaches to reduction of these mobility problems; and
- Information dissemination of successful solutions to suburban mobility problems to other suburban communities throughout the country.

UMTA support and assistance is made available to test a number of different concepts for alleviating traffic in the suburbs. Some of these concepts are to assess the need to create Transportation Management Associations (TMA's), to review traffic management ordinances, and negotiate agreements to improve suburban and regional mobility.

The end product of these efforts will be reports that serve as "Mobility Plans" for suburban communities to reduce traffic congestion in suburban areas. These end products will be distributed to other suburban communities who are assessing solutions for the problems caused by single occupant vehicles.

Project Title: Transportation Demand Management Plan
Grantee/Contractor: San Diego Association of Governments
Location: San Diego, California
Funding: \$400,000 Funding Source: Section 8
Project Monitor: Edward L. Thomas Project Number: CA-08-7001

Description: This project provides funding for the first year of a 3-year program to develop and implement a transportation demand management plan for a network of transportation management associations in North San Diego County. The project will include development of a project management plan; identification, analysis, and evaluation of different transportation demand management strategies; and development and implementation of a marketing plan.

Project Title: Denver Case Studies in Suburban Mobility
Grantee/Contractor: Greater Denver Chamber of Commerce
Location: Denver, Colorado
Funding: \$125,000 Funding Source: Section 6
Project Monitor: John S. Durham Project Number: CO-06-0028

Description: The Greater Denver Chamber of Commerce will conduct in-depth studies of two specific suburban developments in Metropolitan Denver. One of these studies is to upgrade mobility in an older, established development, and the other involves developing transportation mitigation measures for a new development. Based on these studies, the Chamber of Commerce will develop action plans for meeting in other parts of the greater Denver area.

Project Title: Statewide Mobility Improvement Program
Grantee/Contractor: State of Connecticut Department of Transportation
Location: Wethersfield, Connecticut
Funding: \$200,000 Funding Source: Section 8
Project Monitor: Patricia Cass Project Number: CT-08-7001

Description: This project will initiate a new statewide process in the State of Connecticut that will help reduce overall traffic congestion and improve transportation mobility in two critical areas. Working agreements have been executed with Norwalk and Greenwich for the establishment of Transportation Management Associations. The State is developing a model traffic management ordinance.

Project Title: Task Order Support for Suburban Mobility
Grantee/Contractor: Peat, Marwick, Mitchell and Company
Location: Washington, D. C.
Funding: \$115,000 Funding Source: Section 6
Project Monitor: Patricia Cass Project Number: DC-06-0612

Description: This project provides Section 6 task order support for suburban mobility and public/private partnerships activities.

Project Title: South Florida Suburban Mobility Initiative
Grantee/Contractor: Florida Department of Transportation
Location: Tallahassee, Florida
Funding: \$125,000 Funding Source: Section 6
Project Monitor: Edward L. Thomas Project Number: FL-06-0052

Description: This cooperative agreement provides funding for the Florida Department of Transportation to undertake a suburban mobility initiative in South Florida. The areas will include Broward, Palm Beach, and Dade Counties. Working closely with local agencies and the private sector, the Florida DOT will help plan and conduct a series of seminars and workshops on suburban mobility.

Project Title: Enhancing Suburban Mobility
Grantee/Contractor: Council of State Governments
Location: Lexington, Kentucky
Funding: \$170,000 Funding Source: Section 6
Project Monitor: Gwendolyn R. Cooper Project Number: KY-06-0005

Description: This cooperative agreement is to encourage State policy makers to focus their attention on barriers to enhancing suburban/urban mobility and to identify potential roles for the states which could eliminate those barriers. This project will also assist the Council of State Governments in addressing the issue of transportation mobility which is of great concern to State policy makers.

Project Title: Fiscal Year 1989 Small Business Innovative Research Program
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$15,000 Funding Source: Section 6
Project Monitor: John S. Durham Project Number: MA-06-0171

Description: This is the UMTA contribution to the Department of Transportation Small Business Innovative Research (SBIR) program in Fiscal Year 1989. UMTA is required by legislation to participate in the SBIR program using 1.25 percent of its extramural research budget to fund such research.

Project Title: Task Order Support--Suburban Mobility '89
Grantee/Contractor: Dynatrend, Inc.
Location: Woburn, Massachusetts
Funding: \$165,000 **Funding Source:** Section 6
Project Monitor: Edward L. Thomas **Project Number:** MA-06-0189

Description: This project provides Section 6 task order support for suburban mobility and public/private partnerships activities.

Project Title: Paratransit Brokerage
Grantee/Contractor: Metropolitan Area Planning Council
Location: Boston, Massachusetts
Funding: \$81,000 **Funding Source:** Section 6
Project Monitor: Joseph M. Goodman **Project Number:** MA-06-0190

Description: The South Shore Coordinated Transportation (SSCOOT) will operate elderly and handicapped transportation services in eleven communities (Braintree, Cohasset, Hingham, Holbrook, Hull, Milton, Norwell, Quincy, Randolph, Scituate, and Weymouth). These services will integrate dial-a-ride and contracted and purchased service, leading to a reduction in per ride costs and expansion of the service area through maximizing the availability and utilization of available resources.

Project Title: Transportation Management Organization Development
Grantee/Contractor: Southeastern Regional Planning and Economic Development District
Location: Taunton, Massachusetts
Funding: \$50,000 **Funding Source:** Section 8
Project Monitor: Patricia Cass **Project Number:** MA-08-7004

Description: This project will develop a transportation demand management program for the Southeastern Regional Planning and Economic Development District. This area encompasses Middleborough, Lakenville, Taunton, Raynham, and Bridgewater. Plans call for a working group to be convened, a needs assessment to be conducted, and an implementation strategy to be developed.

Project Title: Demand Management Program Development
Grantee/Contractor: Massachusetts Bay Transit Authority
Location: Boston, Massachusetts
Funding: \$100,000 Funding Source: Section 8
Project Monitor: Patricia Cass Project Number: MA-08-7005

Description: This project is aimed at developing an urban transportation demand management program for the Longwood Medical Area of Boston. The Medical Area Service Corporation (MASCO) provides a number of services to the fifteen member institutions in the Longwood Medical Area. MASCO will focus on developing a transportation management organization in the area, conducting a needs and attitude study, developing a demand management program, and marketing this program to its members and potential private providers.

Project Title: Final Voucher Payment to Price Williams
Grantee/Contractor: Price Williams and Associates, Inc.
Location: Silver Spring, Maryland
Funding: \$10,151 Funding Source: Section 6
Project Monitor: Ross W. Adams Project Number: MD-06-0049

Description: This project will provide product packaging and dissemination management and support.

Project Title: Task Order Support--Suburban Mobility '89
Grantee/Contractor: Booz, Allen and Hamilton, Inc., Applied Research
Location: Bethesda, Maryland
Funding: \$65,000 Funding Source: Section 6
Project Monitor: Ronald Boenau Project Number: MD-06-0135

Description: This project provides Section 6 task order support for transit equipment and technology, transit industry studies, safety and security, project evaluation, and suburban mobility activities.

Project Title: Traffic Reduction Model
Grantee/Contractor: Morris County Board of Chosen Freeholders
Location: Morristown, New Jersey
Funding: \$150,000 Funding Source: Section 8
Project Monitor: Joseph M. Goodman Project Number: NJ-08-7003

Description: This project will assist Morris County in developing and implementing a countywide multi-jurisdictional traffic reduction ordinance modeled after that implemented in the nearby township of North Brunswick.

Project Title: Northern I-270 Transportation Management Association Plan
Grantee/Contractor: Mid-Ohio Regional Planning Commission
Location: Columbus, Ohio
Funding: \$67,600 Funding Source: Section 8
Project Monitor: John S. Durham Project Number: OH-08-7002

Description: This project will assist the Mid-Ohio Regional Planning Commission in initial organization and development of a defined program of activities to be implemented by a transportation management association meeting local suburban mobility needs in the Northern I-270 corridor of Columbus, Ohio.

Project Title: Transportation Services Improvements
Grantee/Contractor: Erie Metropolitan Transit Authority
Location: Erie, Pennsylvania
Funding: \$82,400 Funding Source: Section 8
Project Monitor: Patricia Cass Project Number: PA-08-7002

Description: This project will improve the transportation services provided to businesses and residents of the most rapidly growing areas of suburban Erie, including Summit, Millcreek, and McKean Townships. The first phase of this project will assess needs concerning transportation as perceived by employers, employees, residents, and shoppers. Following this assessment, the project will identify a series of service strategies to address the deficiencies.

Project Title: Mobility Planning in North and West Houston
Grantee/Contractor: Houston-Galveston Area Council
Location: Houston, Texas
Funding: \$200,000 Funding Source: Section 8
Project Monitor: Salvator S. Caruso Project Number: TX-08-7003

Description: The Houston-Galveston Area Council will undertake activities in two suburban centers. A mobility plan will be developed to improve accessibility between the Houston Intercontinental Airport and North Houston commercial and residential areas. In West Houston, a plan will be developed to encourage use of the Katy Freeway high occupancy vehicle (HOV) lanes through the use of park-and-ride, flextime, parking management, vanpools and carpools, and use of services provided by private transit contractors.

Project Title: Tysons Corner Development Guide
Grantee/Contractor: Tysons Corner Transportation Association, Inc.
Location: Tysons Corner, Virginia
Funding: \$80,000 Funding Source: Section 6
Project Monitor: Joseph M. Goodman Project Number: VA-06-0139

Description: This project will produce a guide to promote land development that better accommodates pedestrian and transit modes. The guide would help shape development and redevelopment at this rapidly growing center, and could also be used as a model for other communities. Tysons Corner Transportation Association is an organization of employers and developers in the Tysons Corner area whose board includes area elected representatives.

Project Title: National Center for Suburban Mobility
Grantee/Contractor: George Mason University
Location: Fairfax, Virginia
Funding: \$200,000 Funding Source: Section 11
Project Monitor: John S. Durham Project Number: VA-11-0018

Description: This grant will be used to develop an academic center of excellence relative to the Nation's growing suburban mobility needs. The center will be a model for the development of other regional centers concerned with suburban mobility issues and their resolution. Development of a national center for suburban mobility will focus attention on this issue and provide a unique resource for resolving mobility problems and promoting professional growth in this area.

MOBILITY ENHANCEMENT PROGRAM

The goal of the Mobility Enhancement Program is to develop research and demonstration projects designed to increase efficiency, improve convenience, and expand options for the public transportation user. These projects are aimed particularly at low income and transportation disadvantaged groups. Two project areas which fall within this program area are Competitive Services and Consumer Choice.

Competitive Services demonstrations seek to encourage competition in the provision of transportation services through contracting out either specific services or entire transit system operations. In Fiscal Year 1989, a Competitive Services demonstration was approved in Cobb County, Georgia, where a transit system with both local and express service is being developed from scratch.

Consumer Choice projects are designed to increase the mobility of low income and transportation disadvantaged groups by providing low cost transportation options, often through the use of private providers. Three projects in this area were approved in Fiscal Year 1989. Norfolk, Virginia, and Bangor, Maine, both received funding to implement consumer choice demonstrations, while the International Taxicab Association will examine options for testing the Consumer Choice concept and barriers to its implementation.

Project Title: Amendment Created for Project Closeout
Grantee/Contractor: American Public Transit Association
Location: Washington, D. C.
Funding: \$4,064 Funding Source: Section 6
Project Monitor: John S. Durham Project Number: DC-06-0424

Description: This amendment will provide for American Public Transit Association participation in the National Cooperative Transit R&D Program (NCTRP).

Project Title: Competitive Services in Cobb County
Grantee/Contractor: Cobb County Department of Transit
Location: Marietta, Georgia
Funding: \$150,000 Funding Source: Section 6
Project Monitor: Stewart N. McKeown Project Number: GA-06-0021

Description: This project provides funding for the Cobb County Department of Transit to measure costs, benefits, effectiveness, and reliability of competitively contracted transit services in the County.

Project Title: Development of Consumer Choice Demonstrations
Grantee/Contractor: International Taxicab Association
Location: Kensington, Maryland
Funding: \$150,000 Funding Source: Section 6
Project Monitor: Stewart N. McKeown Project Number: MD-06-0139

Description: This project will examine various options for consumer choice demonstrations, find solutions for barriers to implementing consumer choice programs, and then recommend specific sites at which to implement such demonstrations.

Project Title: Consumer Choice Demonstration Project
Grantee/Contractor: Maine Department of Transportation
Location: Augusta, Maine
Funding: \$108,000 Funding Source: Section 4i
Project Monitor: Stewart N. McKeown Project Number: ME-03-4500

Description: This project is designed to assist the transportation disadvantaged (low income and elderly and handicapped) in Bangor, Maine, by providing improved transportation services at discounted rates. Existing human services transportation programs will be coordinated with the paratransit operator and several taxi companies. A discounted ticket system will be developed with specific use restrictions based on the category of user. Individual users will be certified based on age, income, and disability.

Project Title: Consumer Choice Demonstration
Grantee/Contractor: Tidewater Transportation District Commission
Location: Norfolk, Virginia
Funding: \$500,000 Funding Source: Section 4i
Project Monitor: Stewart N. McKeown Project Number: VA-03-4501

Description: This Section 4(i) grant in the Tidewater, Virginia, area will test how consumer choice, through user-side subsidies, can increase the mobility of low income people in the area and, at the same time, encourage competition among public and private transit providers to promote more responsive and less costly services.

Project Title: Technical Assistance Program with the Public/Private Transportation Network (PPTN)
Grantee/Contractor: Comsis Corporation
Location: Silver Spring, Maryland
Funding: \$825,000 Funding Source: Section 6
Project Monitor: Bert Arrillaga Project Number: VA-06-0124

Description: This contract supports the technical assistance activities of the Public/Private Transportation Network. The focus of this program is the adoption of exemplary practices in mass transit through the use of experts who have experience in overcoming common problems. The emphasis is on planning by analogy using successful innovative projects and new techniques as models to achieve successful implementation of such practices.



PUBLIC/PRIVATE PARTNERSHIPS PROGRAM

The Urban Mass Transportation Administration encourages public/private partnerships aimed at providing improved mobility. The objective of these UMTA efforts is to encourage local public/private partnerships in joint financing capital projects and in developing innovative services and organizational arrangements in urban and suburban areas.

The joint financing activities include development of transportation facilities and services that improve urban and suburban mobility and that use little or no Federal funds for capital, operating, and maintenance expenditures. These projects can include construction of transit stations, terminals, maintenance facilities, parking garages, line-haul fixed guideway systems, or other transit structures. Funds are made available to support planning and related development studies, with emphasis on creative financing strategies.

Various demand management strategies and high occupancy vehicle services are employer-supported programs in a key area of interest. TransitCheck is key among these programs. TransitCheck is a fringe benefit that gives employees transit fare discounts of up to \$15 per month (\$180 per year) and is free of any Federal or State taxes.

Activities supporting innovative services and institutional arrangements are designed to foster partnerships on low-cost transportation demand management and transportation systems management strategies. Funds are provided to identify, assess, evaluate, and implement demand and system management strategies.

The end products of this UMTA effort include a set of one or more documents that serve as "Action/Implementation Plans" for construction of systems. These end products will be distributed to other partnerships that are developing schemes to undertake similar transit capital projects and wish to understand implementation schemes. An example of an Action Plan for this program area is a Financial/Implementation Plan for identifying a detailed set of funding and, if necessary, the local legal, administrative, and/or institutional issues that must be addressed and resolved for construction and implementation of the system.

Project Title: Promote Travel Demand Management
Grantee/Contractor: Maricopa Association of Governments
Location: Phoenix, Arizona
Funding: \$200,000 Funding Source: Section 8
Project Monitor: Salvator S. Caruso Project Number: AZ-08-7001

Description: The objective of this project is to promote travel demand strategies as solutions to the suburban mobility problems in the Phoenix area. A travel demand management plan for the area will be developed. The project will organize and select an advisory committee, develop a detailed work plan, identify and analyze different travel demand management strategies, conduct suburban mobility workshops, and prepare a final report.

Project Title: Study Parking Condominium Program
Grantee/Contractor: Howard/Paulina Development Corporation
Location: Chicago, Illinois
Funding: \$100,000 Funding Source: Section 6
Project Monitor: Ross W. Adams Project Number: IL-06-0076

Description: This study will conduct a market analysis and feasibility study of proposed condominium parking spaces at a site adjacent to the Howard Street rail rapid and bus transfer terminal of the Chicago Transit Authority (CTA). This effort will assess the administrative, institutional, and legal issues associated with this parking concept, along with financing strategies for capital funding of parking spaces and the cost of operation and shared maintenance.

Project Title: Market Based Fare Pricing
Grantee/Contractor: Chicago Transit Authority
Location: Chicago, Illinois
Funding: \$200,000 Funding Source: Section 8
Project Monitor: Patricia Cass Project Number: IL-08-7002

Description: The objective of this project is to design a market based system of pricing transit fares. This system of fare pricing, also sometimes called "deep discount" or "consumer based", is expected to simultaneously increase revenue and ridership in contradiction of conventional wisdom and experience.

Project Title: Private Financing of Fixed Guideways
Grantee/Contractor: Harvard University
Location: Cambridge, Massachusetts
Funding: \$200,000 Funding Source: Section 6
Project Monitor: Edward L. Thomas Project Number: MA-06-0188

Description: This project provides funding for Harvard University to study impediments and opportunities for private sector financing of fixed guideway projects. This project will study project development efforts in three areas in which private interests initiated or contemplated playing a major role in the financing and development of new fixed guideway transit systems. The areas include Boston, Baltimore, and Fairfax County, Virginia.

Project Title: Study of City University of New York Transportation
Grantee/Contractor: City University of New York
Location: New York, New York
Funding: \$249,721 Funding Source: Section 6
Project Monitor: Salvator S. Caruso Project Number: NY-06-0149

Description: This project will distill previous UMTA funded research on the role of the private sector in public transportation in New York City into a coherent alternative to the status quo. It will also develop a plan of institutional reform required for implementation. The project will include policy forums, a general conference, and an active dissemination program, all of which will be planned in coordination with UMTA and designed to act as a catalyst for implementation of other similar projects.

Project Title: Private Financing Partnerships Task Order Support
Grantee/Contractor: Battelle Memorial Institute Columbus Laboratories
Location: Columbus, Ohio
Funding: \$50,000 Funding Source: Section 8
Project Monitor: Edward L. Thomas Project Number: OH-08-7001

Description: This task includes a study of the Docklands light rail transit (LRT) system. Based on a previous study, the Docklands LRT project will be compared to LRT projects developed in the U. S. Emphasis will be on the differences in implementation strategies

HUMAN RESOURCES MANAGEMENT PROGRAM

In Fiscal Year 1989, the Human Resources Management Program continued to focus on various approaches to promote improved performance and increased productivity in the transit industry. Work continued, in cooperation with the Phoenix Public Transportation Administration, on improving the available labor pool for transit by promoting partnership relationships with the Nation's community colleges. The project is currently emphasizing entry level positions in transit, particularly the job of bus operator. Curriculum developed by the project was pilot tested in Miami as the result of a cooperative effort between the Miami-Dade Community College and the Metro Dade Transit Agency.

Labor/management cooperation, rather than confrontation, was another focus of the Human Resources Management Program. UMTA awarded a grant to the San Francisco Public Utilities Commission to develop a case study of their Joint Labor Management Board. This cooperative effort between labor and management is a unique effort to document and support the role of organized labor in matters that affect work and the workplace. The case study will document the historical development of the Board and identify key factors that must be present in labor/management cooperation if long-term performance and productivity gains are to be realized.

The Human Resources Management Program also contributed to the Administration's war on drugs. In cooperation with the Southeastern Pennsylvania Transportation Authority and representatives from leading transit agencies around the country, UMTA developed a model pre-employment drug screening program. The model is expected to be available in late 1989 and will provide interested agencies with the information necessary to set up a pre-employment drug screening program or a standard to compare with their existing programs.

Project Title: Labor/Management Study
Grantee/Contractor: City and County of San Francisco, Public Utilities Commission
Location: San Francisco, California
Funding: \$23,500 Funding Source: Section 6
Project Monitor: Charles T. Morison Project Number: CA-06-0239

Description: The grantee will develop a case study of the joint labor/management board of the San Francisco Municipal Railway showing how labor/management cooperation can serve as a model for the transit industry. This model will serve as a concrete example of labor/management cooperation in action with an historical documentation of development.

Project Title: Project Closeout Costs
Grantee/Contractor: Public Technology, Inc.
Location: Washington, D. C.
Funding: \$1,000 Funding Source: Section 6
Project Monitor: Helen M. Tann Project Number: DC-06-0409

Description: This operating budget provides new budget, carryover, and recovery authority.

Project Title: Abstracting Service
Grantee/Contractor: Transportation Research Board, National Academy of Sciences
Location: Washington, D. C.
Funding: \$200,000 Funding Source: Section 6
Project Monitor: John S. Durham Project Number: DC-06-0610

Description: This effort will support the efforts of the National Academy of Sciences to provide the means for experts in all areas of the transit industry to join together in improving the safety, effectiveness, and sufficiency of mass transit services and to provide for a centralized, widely accessible abstracting service for mass transportation innovations. The Transportation Research Board of the National Academy of Sciences will bring together transit specialists in research, operations, and academics to work cooperatively.

Project Title: Labor Pool Demonstration Project
Grantee/Contractor: Miami-Dade Community College, Wolfson Campus Center for Business and Information
Location: Miami, Florida
Funding: \$11,880 Funding Source: Section 11
Project Monitor: Charles T. Morison Project Number: FL-11-0017

Description: This grant will assist the Regional Public Transit Authority in planning, designing, and implementing a transit education curriculum. Miami-Dade Community College will continue to provide advisory service to the Phoenix labor pool demonstration projects and assist in demonstrating products at the local level.

Project Title: Labor Pool Demonstration Project
Grantee/Contractor: Essex County College of Higher Education
Location: Newark, New Jersey
Funding: \$12,900 Funding Source: Section 11
Project Monitor: Charles T. Morison Project Number: NJ-11-0013

Description: This grant will provide funding for Maricopa Community College and Essex Community College, in cooperation with New Jersey Transit, to continue provision of advisory service in support of the labor pool demonstration project in Phoenix. The grantee will also demonstrate products at the local level.

Project Title: Labor Pool Demonstration Project
Grantee/Contractor: Borough of Manhattan Community College
Location: New York, New York
Funding: \$13,932 Funding Source: Section 11
Project Monitor: Charles T. Morison Project Number: NY-11-0041

Description: This grant will provide funding for the Borough of Manhattan, Manhattan Community College, in cooperation with the New York City Transit Authority, to continue to provide advisory services in support of the labor pool demonstration project in Phoenix. They will also demonstrate products at the local level.



MANAGERIAL TRAINING GRANTS PROGRAM

In October 1987, the Urban Mass Transportation Administration announced the intent to award Single Agency Grants as the sole use of Section 10 Managerial Training Grant funds. These grants are awarded to individual transit agencies in response to comprehensively developed programs that emphasize cost effective training conducted at the local level.

Thirteen grants totaling \$842,586 were awarded in Fiscal Year 1989 to transit agencies throughout the country. Grant applications concentrated on training offered locally or on-site. Drug awareness was required as part of a grantee training effort in keeping with the UMTA initiative to fight substance abuse in the transit industry.

For the first time in Fiscal Year 1989, five grants were awarded to States to promote the active role of State transit associations in training and development of their members. These grants will provide training opportunities for small agencies who might not otherwise be able to participate in the Section 10 program. At the same time, the transit associations will be able to prioritize training on a cost effective basis.

Managerial Training Grants offer the transit industry an incentive to look at training and development as part of its long-range strategic planning effort and to better prepare the existing work force to deal with changing technology, along with the need to upgrade managerial, technical, and professional skills.

With an ongoing emphasis on cost effectiveness leading toward increased productivity and improved performance, UMTA has shaped the Managerial Training Grant Program into a financial resource as well as a tool to complement strategic planning. The Single Agency Grants awarded in Fiscal Year 1989 reflected this UMTA initiative. Applications included not only the courses of study and the targeted participants, but a rationale as to why this training was important to the future needs of the organization requesting the grant. For the first time, transit organizations were able to coordinate human resources planning with transit planning.

UMTA is monitoring the grants awarded to determine the success of the shift in program direction. Selection of participants as well as curriculum should reflect the various priorities established by the recipients as opposed to predetermined priorities under the short course format in past years.

Finally, the Managerial Training Program has become the perfect complement to the UMTA human resources initiative. As an example, all grants awarded in Fiscal Year 1989 reflected drug awareness training. This was in response to UMTA's overall efforts to fight substance abuse in the transit industry.

Project Title: Single Agency Training Grant
Grantee/Contractor: Birmingham-Jefferson County Transit Authority
Location: Birmingham, Alabama
Funding: \$26,278 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: AL-10-0012

Description: The grantee will conduct a series of on-site training programs in a number of subjects using faculty made available from the University of Alabama-Birmingham.

Project Title: Single Agency Training Grant
Grantee/Contractor: Santa Cruz Metropolitan Transit District
Location: Santa Cruz, California
Funding: \$15,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CA-10-0321

Description: The majority of the Santa Cruz Metropolitan District managers and supervisors have come from within the ranks of the organization. Therefore, the District has developed a training program that will meet the special needs of its managers, supervisors, and technical staff. This training program consists of seven courses, which include Long Range and Strategic Planning Skills Development for Program Managers, Transit Operations Planning Training Program, Using UNIX Operation Systems for Office Automation, and Business Organization.

Project Title: Single Agency Training Program
Grantee/Contractor: San Francisco Bay Area Rapid Transit District
Location: Oakland, California
Funding: \$82,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CA-10-0322

Description: The San Francisco Bay Area Rapid Transit District (BART) proposed a training program consisting of the following three components: (1) quality and performance management, (2) a work environment free of chemical dependency, and (3) career management.

Project Title: Single Agency Training Grant
Grantee/Contractor: Southern California Rapid Transit District
Location: Los Angeles, California
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CA-10-0323

Description: This grant will provide assistance to the transit agency in the training of managerial, technical, and professional personnel. The grant recipient will make available, through public and private institutions, a variety of training courses and activities for its employees.

Project Title: Single Agency Training Grant
Grantee/Contractor: Orange County Transit District
Location: Garden Grove, California
Funding: \$47,955 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CA-10-0324

Description: The Orange County Transit District has undergone an extensive needs analysis in the design and preparation of a comprehensive training plan. They will provide training opportunities for approximately 260 employees. The proposed training program consists of 19 training courses.

Project Title: Single Agency Training Grant
Grantee/Contractor: Colorado Department of Highways
Location: Denver, Colorado
Funding: \$50,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: CO-10-0023

Description: This grant will provide assistance to the State transit agency in the training of managerial, technical, and professional personnel. The grantee will make available, through public and private institutions, a variety of training courses and activities for employees in public transportation in Colorado.

Project Title: Single Agency Training Grant
Grantee/Contractor: Lakeland Area Mass Transit District
Location: Lakeland, Florida
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: FL-10-0098

Description: The grantee, representing members of the Florida Transit Association, will conduct training on a cost effective basis in response to the priority training needs of the participating agencies.

Project Title: Single Agency Training Grant
Grantee/Contractor: Ann Arbor Transportation Authority
Location: Ann Arbor, Michigan
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: MI-10-0087

Description: This grant, on behalf of agencies throughout the State of Michigan, will provide assistance in the training of managerial, technical, and professional personnel. The grantee will make available, through public and private institutions, a variety of training courses and activities for its employees.

Project Title: Single Agency Training Grant
Grantee/Contractor: Duluth Transit Authority
Location: Duluth, Minnesota
Funding: \$3,853 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: MN-10-0046

Description: This grant reflects the training requested by the grantee. The course, Transit Management Workshop, is a 2-week residential program that has been offered to hundreds of transit professionals for over six years. UMTA's share of the cost is \$1,450.

Project Title: Single Agency Training Grant
Grantee/Contractor: Greater Cleveland Regional Transit Authority
Location: Cleveland, Ohio
Funding: \$100,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: OH-10-0162

Description: This grant will provide assistance to the transit agency in the training of managerial, technical, and professional personnel. The grantee will make available, through public and private institutions, a variety of training courses and activities for its employees.

Project Title: Single Agency Training Grant
Grantee/Contractor: Southeastern Pennsylvania Transportation Authority
Location: Philadelphia, Pennsylvania
Funding: \$90,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: PA-10-0114

Description: This grant will provide assistance to the transit agency in the training of managerial, technical, and professional personnel. The grantee will make available, through public and private institutions, a variety of training courses and activities for its employees.

Project Title: Comprehensive Training Program
Grantee/Contractor: Washington State Department of Transportation, Planning, Research and Public Transportation Division
Location: Olympia, Washington
Funding: \$70,000 Funding Source: Section 10
Project Monitor: Helen M. Tann Project Number: WA-10-0109

Description: The Washington State Department of Transportation, representing the transportation coalition of Washington, will conduct training on a cost effective basis in response to the priority training needs of the participating agencies.

Project Title: Single Agency Training Program
Grantee/Contractor: Wisconsin Department of Transportation, Division of Transit
Location: Madison, Wisconsin
Funding: \$57,500
Project Monitor: Helen M. Tann
Funding Source: Section 10
Project Number: WI-10-0055

Description: This grant will provide assistance to the transit agencies involved in the training of managerial, technical, and professional personnel. The grant recipient will make available, through public and private institutions, a variety of training courses and activities for its employees and particularly employees of transit agencies throughout the State.



UNIVERSITY RESEARCH AND TRAINING PROGRAM

Under the provisions of Section 11(a) of the Urban Mass Transportation Act of 1964, as amended, UMTA is authorized to make grants to public and private non-profit institutions of higher learning on matters relating to the design, management, and operation of urban and rural transportation systems. The program encourages a high ratio of student participation. The program also encourages the establishment of a cooperative arrangement with transit agencies for the placement of graduate students to enhance their awareness and business knowledge about transportation system operations.

In Fiscal Year 1989, the University Research and Training Program awarded seven grants to seven universities totaling \$570,300. The grants covered topics including Improved Suburban Mobility, Increased Non-Federal Share of Capital Funding, Innovative Financing, Public/Private Partnerships, and Safety and Security.

Project Title: Impact of the Federal Overmatch Initiative
Grantee/Contractor: Georgia Institute of Technology Research Corporation
Location: Atlanta, Georgia
Funding: \$84,898 Funding Source: Section 11
Project Monitor: Robert R. Trotter Project Number: GA-11-0020

Description: This grant will investigate the impact of the Federal overmatch initiative on local transit decision making.

Project Title: Manual on Contracting for Maintenance Service
Grantee/Contractor: Iowa State University
Location: Ames, Iowa
Funding: \$84,830 Funding Source: Section 11
Project Monitor: Robert R. Trotter Project Number: IA-11-0008

Description: Iowa State University will document the use of private contractors for bus maintenance services and to create an instructional maintenance manual.

Project Title: Market Research to Reduce Suburban Traffic Congestion
Grantee/Contractor: Northwestern University
Location: Evanston, Illinois
Funding: \$84,955 Funding Source: Section 11
Project Monitor: Robert R. Trotter Project Number: IL-11-0033

Description: This grant will apply market research methods to develop incentives and disincentives to encourage travelers to switch from drive-alone autos to shared-ride and/or to shift travel time.

Project Title: Monitoring Performance
Grantee/Contractor: Massachusetts Institute of Technology
Location: Cambridge, Massachusetts
Funding: \$84,983 Funding Source: Section 11
Project Monitor: Robert R. Trotter Project Number: MA-11-0049

Description: A university research and training grant to investigate current practice in monitoring performance of private operators in a variety of local service arrangements.

Project Title: Risk Management for Rural Transit
Grantee/Contractor: North Carolina A&T State University
Location: Greensboro, North Carolina
Funding: \$60,695 Funding Source: Section 11
Project Monitor: Robert R. Trotter Project Number: NC-11-0016

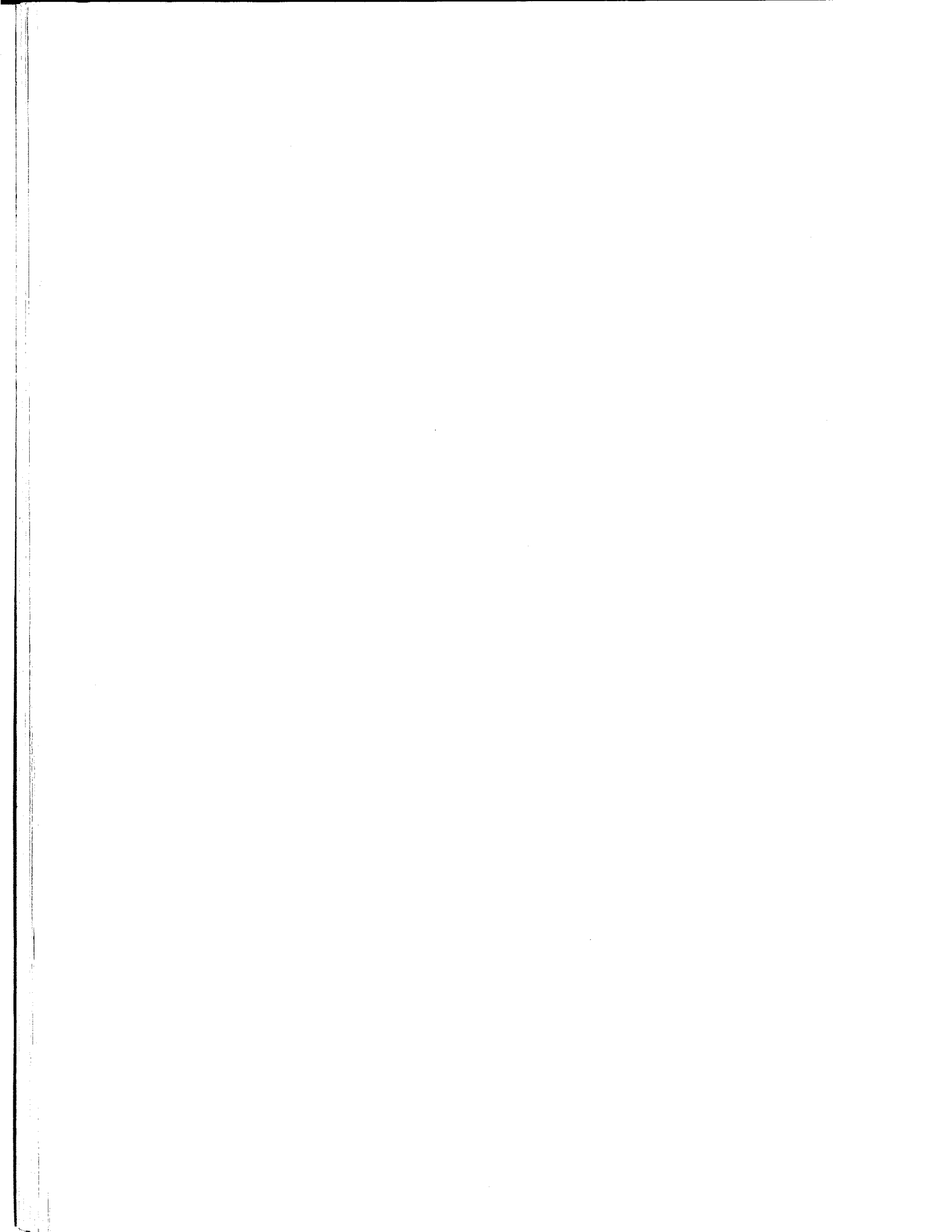
Description: Under this grant, North Carolina A&T State University will produce a transferrable technical training workshop on risk management for Section 18 rural public transportation systems.

Project Title: Private Sector Involvement in Agency Operations
Grantee/Contractor: University of Pennsylvania
Location: Philadelphia, Pennsylvania
Funding: \$84,951 Funding Source: Section 11
Project Monitor: Robert R. Trotter Project Number: PA-11-0035

Description: The University of Pennsylvania will investigate the possibility of private sector provision and financing of advanced information systems for bus transit operations.

Project Title: Guidelines for Sensitive Land Use Design
Grantee/Contractor: University of Wisconsin at Milwaukee
Location: Milwaukee, Wisconsin
Funding: \$84,988 Funding Source: Section 11
Project Monitor: Robert R. Trotter Project Number: WI-11-0012

Description: This grant will develop guidelines for land use design and development that are sensitive to the operational and economic needs of public transit systems. Emphasis will be on creating standards for land use patterns which can be used by private developers and planners for a better fit of public transport into a variety of land use types--residential, shopping, office, recreational, and industrial--and to relate to overall locational issues, site planning, building design, and street design so that each element will be considered to determine what mix of techniques can be used to create a transit conducive environment along with meeting other needs of land use activities.



RURAL TRANSPORTATION PROGRAM

The Office of Technical Assistance and Safety Rural Transportation Program was developed to bring together the many ad hoc rural technical assistance efforts being carried out by various components within UMTA. This program has brought the rural technical assistance capability of UMTA together in one unit. This unit has enabled the UMTA Administrator to respond to technical assistance issues and develop policy guidelines that are meaningful and cost effective to State departments of transportation and public, private, and specialized rural transportation providers.

The Rural Transportation Program consists of the following six elements: The Rural Transit Assistance Program National Program, Private Sector Transportation Initiatives, Safety Initiatives, Small Vehicle Technology, UMTA/Department of Health and Human Services (DHHS) Coordination, and Research and Demonstrations. The program will seek to promote the delivery of safe and effective public and private transportation in non-urbanized areas and develop national rural transportation resources to aid in the dissemination of information and technical assistance. Also, the program will seek ways to expand participation of the private sector in providing rural transportation and the use of volunteers to reduce costs.

During Fiscal Year 1989, the Rural Transportation Program passed milestones toward accomplishing goals to provide assistance in the area of training, technical assistance, and the facilitation of communication to State departments of transportation and rural and specialized transit operations. The flagship of the program is the Rural Transit Assistance Program (RTAP). This Congressionally mandated program authorized UMTA \$5 million to develop a new coordinated program of training, technical assistance, research, and other support services specifically designed to improve the delivery of transit services to rural areas. Out of this \$5 million, UMTA allocated 85% to State departments of transportation. The remaining 15% was allocated to the RTAP National Program, which is incorporated in the Rural Transportation Program.

In its second year, the Rural Feeder Program is developing marketing strategies and materials. These materials will be used by participating rural transit operators to enhance their awareness of potential revenue producing opportunities. The Montana State Department of Commerce, Public Transportation Division, is developing a modal anti-drug handbook for Section 18 transit providers. The handbook will describe guidelines for collecting specimens, contracting with the Department of Health and Human Services laboratories, and utilizing medical review officers. The State of Montana also solicited advice from surrounding States during the project.

Project Title: Transportation for People with Disabilities
Grantee/Contractor: National Easter Seal Society, Inc., Office of Governmental Affairs
Location: Washington, D. C.
Funding: \$1,350,000
Project Monitor: Roger Tate
Funding Source: Section 6
Project Number: DC-06-0599

Description: This Congressionally mandated project is designed to improve access to mass transportation services for people with disabilities. The project will develop a cooperative model program aimed at focusing on five key concerns of people with disabilities and local transit operators, both urban and rural, who wish to improve mass transit accessibility.

Project Title: Market Strategies for Rural Feeder
Grantee/Contractor: Rural America
Location: Washington, D. C.
Funding: \$99,750
Project Monitor: Roger Tate
Funding Source: Section 6
Project Number: DC-06-0621

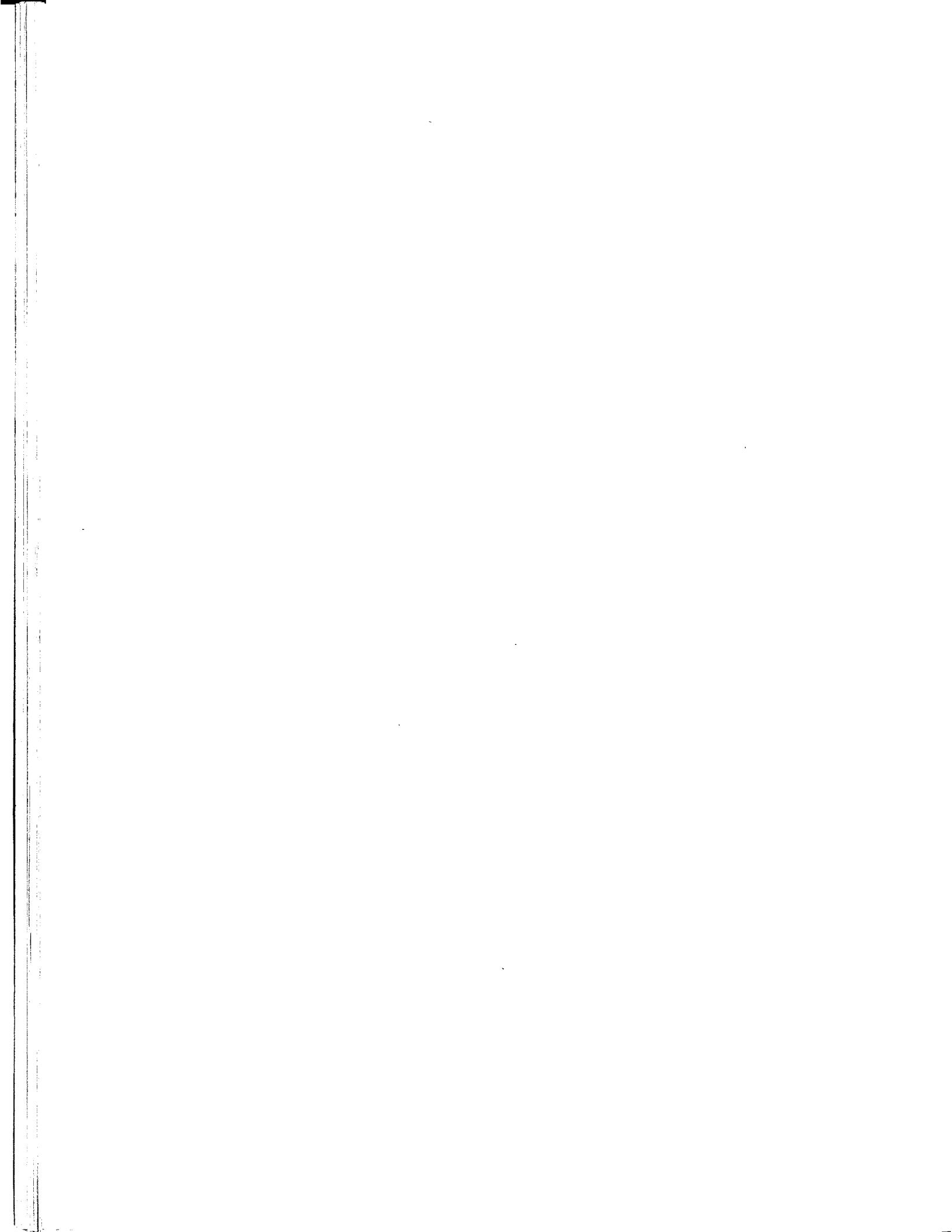
Description: This project is a continuation of the original rural connector grant involving the use of rural transit providers as a feeder service to the private, intercity bus provider. This funding will expand on the previous scope of work as well as allow the grantee to develop marketing strategies to expand feeder service throughout the Nation.

Project Title: Technical Support to Rural Programs
Grantee/Contractor: American Public Works Association
Location: Chicago, Illinois
Funding: \$750,000
Project Monitor: Roger Tate
Funding Source: Section 18
Project Number: IL-18-X902

Description: The American Public Works Association will be responsible for providing technical support to the Rural Technical Assistance Program (RTAP) National Program. The grantee will be responsible for developing training materials that meet the needs of rural transit providers and State and local officials, continuing the efficient use of the UMTA RTAP resource center and telephone hotline, and providing overall management activities.

Project Title: Anti-Drug Procedures for Transit
Grantee/Contractor: Montana Department of Commerce
Location: Helena, Montana
Funding: \$50,000 Funding Source: Section 6
Project Monitor: Roger Tate Project Number: MT-06-0004

Description: This project will assist the Montana Department of Commerce Transportation Division to develop a modal anti-drug handbook for small transit providers. This handbook will assist States Nationwide in implementing the UMTA final drug rule as it pertains to rural and small urban transit providers. The State of Montana will also develop guidelines for specimen collection, contracting with Department of Health and Human Services laboratories, and how to utilize medical review.



RAIL MODERNIZATION PROGRAM

The purpose of the Rail Modernization Program is to reduce the cost of modernizing existing rail transit systems through judicious use of Section 3(a)(1)(C) and Section 8 grants to transit agencies willing to explore innovative and improved products that would reduce capital and operating costs. The program provides technical assistance support to the Office of Grants Management and the UMTA Regional Offices in their planning and conduct of rail modernization efforts to be funded under the general Section 3 Capital Grant and Section 9 Formula programs. This program will identify, evaluate, and document significant cost effective approaches to modernizing rail transit systems in the areas of facilities, equipment, systemwide controls, and contract management. There are two major subprograms under the Rail Modernization Program: Railcar Cost Containment and Infrastructure and Signal Systems Modernization. The latter program is currently in the developmental stage.

The Railcar Cost Containment Program is a 2-stage program where, in the first stage, Section 8 Technical Studies Grants have been made to four rail transit systems for the purpose of assisting each in examining their individual procurement processes and railcar specifications (technical and contractual). The objective of these projects is to achieve reasonable bid prices through the use of revised procurement techniques and/or specifications which will be utilized in future railcar purchases. Technical Study Grants have been made to the following transit authorities or related agencies:

Southeastern Pennsylvania Transportation Authority
New Jersey Transit
Metropolitan Rail, Chicago
Atlanta Regional Commission (in cooperation with the Metropolitan
Atlanta Rapid Transit Authority)

In the second stage, a Section 3 Capital Assistance Grant will be made to one of these four grantees for the procurement of railcars based on the results of the technical studies.

A second purpose of the Rail Modernization Program is to increase the rate of adoption of techniques that reduce the cost of modernizing existing rail transit systems, and provide support to the Office of Grants Management and the UMTA Regional Offices in administering the Rail Modernization Program. The Rail Modernization Study Final Report that was prepared by Gannett Fleming for UMTA (April 1987) estimated the cost to restore existing rail transit systems sub-elements to a "good" condition over the next 10-year period to be approximately \$18 billion. Of this amount, approximately \$3.5 billion would be needed for track and power distribution, \$3.4 billion for vehicles, \$6.7 billion for stations and structure, \$2.7 billion for systemwide controls, and \$1.6 billion for maintenance facilities. The use of innovative products and improved techniques in the acquisition of equipment and the construction of facilities in the Rail Modernization Program could provide significant cost and time savings and improve reliability of rail systems operations.

Project Title: Railcar Cost Containment Study
Grantee/Contractor: Atlanta Regional Commission
Location: Atlanta, Georgia
Funding: \$208,000 Funding Source: Section 8
Project Monitor: Jeffrey G. Mora Project Number: GA-08-7002

Description: Due to a dramatic increase in railcar costs, this project was developed to assist the Metropolitan Atlanta Rapid Transit Authority in improving its rolling stock procurement process and modify its technical and contractual specifications with the goal of reducing or stabilizing railcar bid prices on future orders.

Project Title: Cost Adjustment
Grantee/Contractor: Lea Transportation Research Corporation
Location: Chantilly, Virginia
Funding: \$1,813 Funding Source: Section 6
Project Monitor: Jeffrey G. Mora Project Number: IT-06-0273

Description: This contract is to provide technical support to the Office of Engineering Evaluations on rail systems issues, such as standardization.

Project Title: Construction Management Guidelines and Training
Grantee/Contractor: Dynatrend, Inc.
Location: Woburn, Massachusetts
Funding: \$58,359 Funding Source: Section 6
Project Monitor: Ronald Boenau Project Number: MA-06-0175

Description: This project provides funds to a task order contract to evaluate construction management guidelines and training service and methods demonstration projects and perform special studies and analyses.

Project Title: Study of the 63rd Street Tunnel Improvements
Grantee/Contractor: Fairleigh Dickinson University, College of Science and Engineering
Location: Teaneck, New Jersey
Funding: \$93,317 Funding Source: Section 6
Project Monitor: Jeffrey G. Mora Project Number: NJ-06-0028

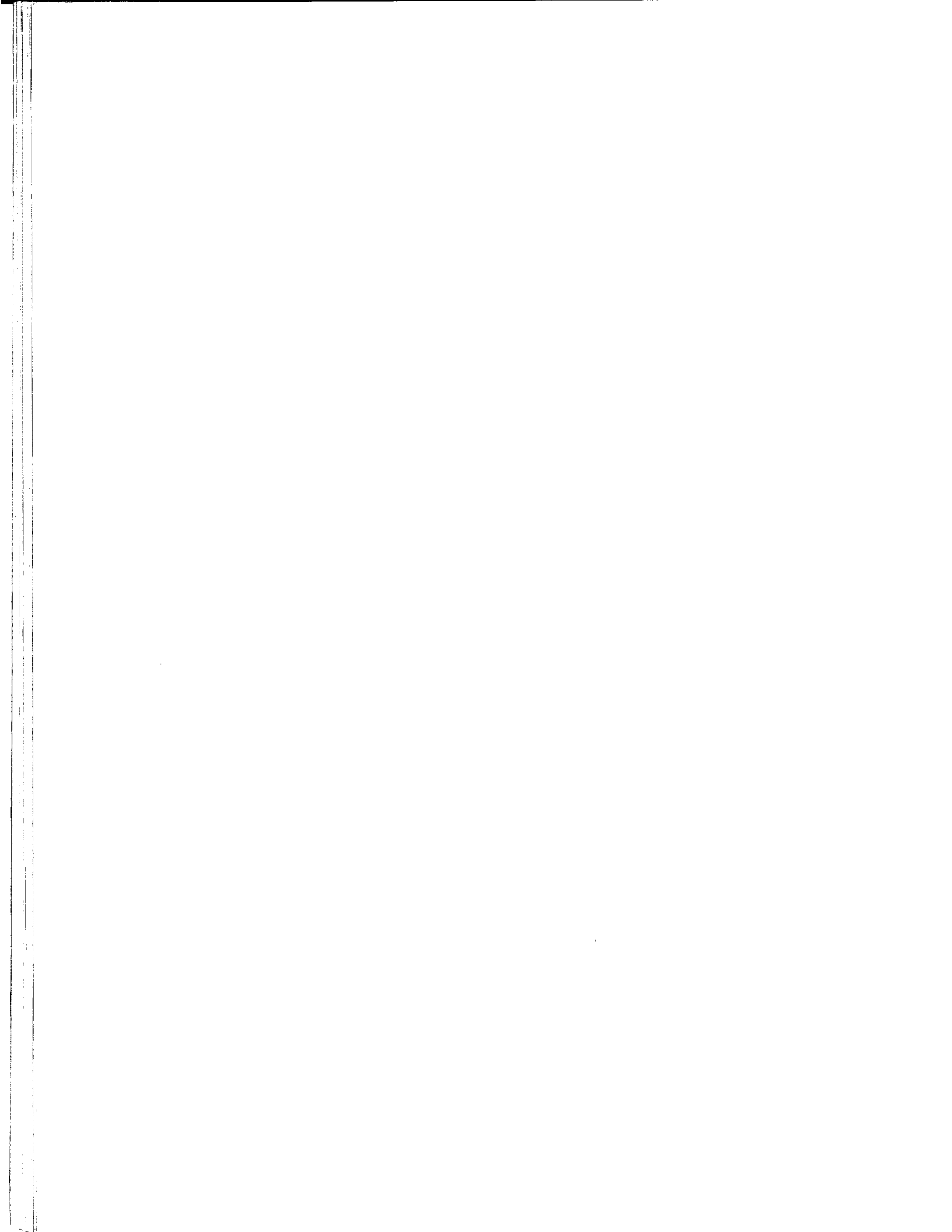
Description: This research is focused on improving the effectiveness of the 63rd Street Tunnel between Manhattan and Queens in New York City through a study of proposed operational and capital improvements and potential public/private developments to finance proposed improvements.

Project Title: Study of the 63rd Street Tunnel Improvements
Grantee/Contractor: Polytechnic University
Location: Brooklyn, New York
Funding: \$59,951 Funding Source: Section 6
Project Monitor: Jeffrey G. Mora Project Number: NY-06-0150

Description: This research will focus on improving the effectiveness of the 63rd Street Tunnel between Manhattan and Queens in New York City through a study of proposed operational and capital improvements and potential public/private developments to finance proposed improvements.

Project Title: Study of the 63rd Street Tunnel Improvements
Grantee/Contractor: City University of New York
Location: New York, New York
Funding: \$100,000 Funding Source: Section 8
Project Monitor: Jeffrey G. Mora Project Number: NY-08-7007

Description: This project will develop and evaluate a series of alternatives to reduce overcrowding and more effectively utilize the 63rd Street Tunnel in the Queens-Manhattan corridor of New York City.



TRANSPORTATION SYSTEMS INITIATIVES PROGRAM

The Transportation Systems Initiatives (TSI) Program consists of individual initiatives that are intended to meet specific administration goals, such as: moving and leading the country towards the adoption of clean burning alternative fuels that also increase national energy security; the provision of mass transportation services at lower capital and operating costs; and assisting UMTA management and State and local officials in their efforts to select cost effective mass transportation improvements by providing them with reliable data on the cost, benefits, financial feasibility, and performance of various alternative transit system modes. These initiatives will provide incentives and motivation for public and private mass transportation providers to join UMTA in meeting these national goals and objectives. The program will also implement the requirements of the UMTA authorization legislation (STURAA of 1987) with regard to the Act's requirement that new bus models be tested at a facility to be constructed in Altoona, Pennsylvania, and continue the Congressionally mandated fuel cell/battery bus development project.

The EPA 1991 emission regulations for heavy-duty diesel transit bus engines require a substantial reduction in the emission of particulates. These regulations cannot be met with diesel fueled engines by 1991 since the engine-out after treatment particulate traps that are needed to meet these standards are not available on the market. These 1991 transit bus emission standards can, however, be met through the use of diesel engines that are modified to run on 100% alternative fuels, such as methanol and compressed natural gas (CNG).

On September 16, 1988, former Secretary of Transportation Burnley announced the UMTA Alternative Fuels Initiative (AFI) which is intended to help transit agencies meet the EPA 1991 emission standards by assisting and encouraging them to buy alternative fueled engines that are clean burning and which do not make use of petroleum based fuels, thus improving the Nation's energy security position. Up to \$35.1 million in UMTA capital funds will be made available to implement this initiative. In addition to the Alternative Fuels Initiative, UMTA has sponsored efforts to test and evaluate particulate traps on transit buses operating in revenue service as well as other means that will clean up emissions from diesel fueled buses, and is continuing in its joint effort with the Department of Energy to develop a fuel cell/battery bus.

A New Bus Model Testing Facility has been established as a result of the UMTA authorization legislation (STURAA of 1987) which required that all new bus models as of October 1, 1989, be tested for vehicle maintainability, reliability, safety, performance, structural integrity, fuel economy, and noise. To meet the requirements of this legislation, UMTA has contracted with the Pennsylvania State University to implement and operate the bus testing facility using the existing Rail Training Center in Altoona and the Pennsylvania State University proving grounds in State College, Pennsylvania.

The Transportation Systems Initiatives Program is intended to assist public and private mass transportation providers in their efforts to provide services at lower capital and operating costs. Guidelines on appropriate techniques and procedures that can be used to enhance the control and accountability of revenues collected have been prepared and are being demonstrated at three sites. The first phase of a multimodal pass system will be implemented in the San Francisco Bay Area Rapid Transit District. The multimodal pass will improve the convenience of transfers between bus and rail systems by reducing transfer times. In addition, the pass will provide greater accountability of funds received by the various transit agencies in the Bay Area and reduce the handling of funds by employees. Under the TSI Program, techniques to ensure quality control and assurance during the construction of transit facilities will be studied and documented, and alternative ways of reducing transit vehicle weight, such as use of composite materials, will be demonstrated.

This Program will also provide technical support to UMTA and local agencies in project development activities, including financial planning, alternatives analysis, preliminary engineering, final design, and construction management. Technical guidelines and training will be developed on travel demand forecasting, revenue estimation, financial planning, and related requirements of the UMTA Act of 1987 and UMTA's Financial Capacity Circular. Technical assistance will be provided on an as-needed basis to review work plans, methodologies, and results for project development activities.

Two additional Congressionally mandated studies are being undertaken, one by the Urban Harbors Institute at the University of Massachusetts at Boston to study urban harbor transportation modes, policies, and their environmental impact; and the other by the California Department of Transportation which will address the technical feasibility of building and operating a magnetically powered electric roadway for buses.

Project Title: Amendment Created for Project Closeout
Grantee/Contractor: Rohr Industries, Inc.
Location: Chula Vista, California
Funding: \$19,920 Funding Source: Section 6
Project Monitor: Ronald D. Kangas Project Number: CA-06-0094

Description: This is an amendment to close out Phase IIIA of the Advanced Group Rapid Transit (AGRT) Development Program.

Project Title: Farebox Revenue Protection
Grantee/Contractor: Alameda-Contra Costa Transit District
Location: Oakland, California
Funding: \$34,000 Funding Source: Section 6
Project Monitor: Irving Chambers Project Number: CA-06-0241

Description: A general risk assessment of the Alameda-Contra Costa Transit District (AC Transit) processing procedures for farebox revenues will be made using transit fare revenue accountability and protection guidelines. Internal control vulnerabilities will be identified and recommended countermeasures will be adopted to reduce potential risks of internal and external revenue theft.

Project Title: Trap Oxidizer Demonstration
Grantee/Contractor: Denver Regional Transportation District
Location: Denver, Colorado
Funding: \$172,500 Funding Source: Section 3(a)(1)(C)
Project Monitor: George I. Izumi Project Number: CO-03-3501

Description: A trap oxidizer is a piece of equipment attached to a bus engine to reduce diesel particulate emissions. These funds will be used to purchase and install trap oxidizers on five diesel buses; conduct tests and generate data on their impact on exhaust emissions, bus engine maintenance cost, and overall bus performance; and train transit personnel needed to support the bus testing program over the 2-year period of the project.

Project Title: Fuel Cell Battery Bus, Phase I: Proof-of-Feasibility
Grantee/Contractor: Department of Energy, Office of Transportation Systems
Location: Washington, D. C.
Funding: \$590,000 Funding Source: Section 6
Project Monitor: Shang Q. Hsiung Project Number: DC-06-0566

Description: This Congressionally mandated program will determine the feasibility of a phosphoric acid fuel cell/battery propulsion system for urban bus applications. A 4-phase program has been established jointly with the Department of Energy. Phase I is designed to provide the proof-of-feasibility of such a system. In this phase two alternative design approaches will be breadboard tested.

Project Title: Task Order Support
Grantee/Contractor: Peat, Marwick, Mitchell and Company
Location: Washington, D. C.
Funding: \$200,000 Funding Source: Section 8
Project Monitor: Edward L. Thomas Project Number: DC-08-7001

Description: This project provides Section 6 task order support for transit capital project development and financing, planning. Alternatives analysis products are reviewed, operating cost data is completed, and financial planning training is developed.

Project Title: Updating Financial Analysis Templates
Grantee/Contractor: Federal Highway Administration
Location: Washington, D. C.
Funding: \$24,504 Funding Source: Section 8
Project Monitor: Edward L. Thomas Project Number: DC-08-7003

Description: The Federal Highway Administration, through a contract with the Government Finance Research Center, will update the "Transit and Highway Revenue Improvements Forecasting Templates" (THRIFT). The modifications will improve THRIFT's efficiency and capability. In addition, the updated THRIFT program will be tested and documented in a revised user's manual. UMTA's assistance will be provided to conduct the test, refine the updated THRIFT based on the test, and revise the user's manual.

Project Title: Fare Revenue and Protection Guidelines
Grantee/Contractor: Chicago Transit Authority
Location: Chicago, Illinois
Funding: \$33,000 Funding Source: Section 6
Project Monitor: Irving Chambers Project Number: IL-06-0077

Description: The Chicago Transit Authority will demonstrate the correlation between electronic farebox revenue as reported by the farebox computer with the amount of revenue at the central counting facility. This project will demonstrate how transit fare revenue accountability and protection guidelines may be adapted to large transit systems.

Project Title: Cost Overrun
Grantee/Contractor: Lea, Elliott, McGean and Company
Location: Chantilly, Virginia
Funding: \$1,753 Funding Source: Section 6
Project Monitor: Abdo S. Ahmed Project Number: IT-06-0314

Description: This project consists of technical assistance to the Office of Bus and Paratransit Systems on trolleybus and electric propulsion technology.

Project Title: Alternative Fuels Initiative Program
Grantee/Contractor: Battelle Memorial Institute Columbus Laboratories
Location: Columbus, Ohio
Funding: \$260,000 Funding Source: Section 6
Project Monitor: Ronald Boenau Project Number: OH-06-0056

Description: This project provides Section 6 task order support for transit equipment and technology, transit industry studies, safety and security, project evaluation, and suburban mobility activities.

Project Title: Bus Diesel Engine Trap Project
Grantee/Contractor: Southeastern Pennsylvania Transportation Authority
Location: Philadelphia, Pennsylvania
Funding: \$227,500 Funding Source: Section 3(a)(1)(C)
Project Monitor: George I. Izumi Project Number: PA-03-3501

Description: This project is to assist the Southeastern Pennsylvania Transportation Authority (SEPTA) in evaluating the feasibility of diesel bus engine particulate traps to reduce air pollution in the Philadelphia area. Diesel traps will be tested in twenty revenue service buses. The diesel traps provide an alternative to methanol, compressed natural gas, and other alternatively fueled vehicles.

Project Title: New Bus Model Facilities
Grantee/Contractor: Pennsylvania State University
Location: State College, Pennsylvania
Funding: \$3,100,000 Funding Source: Section 31
Project Monitor: George I. Izumi Project Number: PA-31-0001

Description: This contract provides for the establishment and operation of the new bus model testing facilities by renovating the existing Rail Training Center in Altoona and modifying the Pennsylvania State University Proving Grounds near State College. The effort includes design, development, site preparation, construction, and installation of facilities and equipment to test new buses of all sizes.

Project Title: Altoona Lease Extension
Grantee/Contractor: Altoona Area Vocational-Technical School
Location: Altoona, Pennsylvania
Funding: \$39,476 Funding Source: Section 31
Project Monitor: George I. Izumi Project Number: PA-31-1198

Description: This is for an extension on the lease of office and laboratory space in the Rail Training Center (RTC) in Altoona, Pennsylvania, and to obtain local support services for the new bus model testing project.

Project Title: Amendment Created for Project Closeout
Grantee/Contractor: The Mitre Corporation
Location: McLean, Virginia
Funding: \$1,060 Funding Source: Section 6
Project Monitor: Steven A. Barsony Project Number: VA-06-0073

Description: This project amendment was to close out an existing project.

Project Title: Fare Accountability and Guidelines
Grantee/Contractor: Greater Richmond Transit Company
Location: Richmond, Virginia
Funding: \$33,000 Funding Source: Section 6
Project Monitor: Irving Chambers Project Number: VA-06-0143

Description: The Greater Richmond Transit Company will identify opportunities for enhancement of their revenue processing and fare collection practices and then they will demonstrate how the accountability and protection guidelines may be adapted to medium-sized transit systems. The results of these efforts will be shared with similar sized transit systems to help them develop effective and efficient revenue collection systems.

SAFETY AND SECURITY PROGRAM

The Fiscal Year 1989 Safety and Security Program continues into a second year the initiatives undertaken in 1988 in response to the safety priorities of the Secretary of Transportation and the Urban Mass Transportation Administrator as well as the challenge presented to the transit industry by the use of drugs in the workplace.

It builds upon knowledge of the drug problem gained during the 1988 rulemaking of the Urban Mass Transportation Administration, continues and refines the technical assistance activities associated with State support of local agency safety and security programs, and furthers the restructuring of the UMTA training program.

The objectives of the Safety and Security Program are:

- To improve the ability of transit managers and operators to advance their safety and security goals; and
- To increase the capability of State and local agencies to provide for and oversee safety and security.

In pursuit of its objectives, this program emphasizes the proactive and preventive management techniques provided by system safety and security concepts. The prevention and deterrence promoted by the UMTA anti-drug rule is a good example. A national cooperative training program with a redistribution of the costs and provision of training gained momentum in 1989, while drug control continued to dominate the topical agenda.

Examples of work being conducted in the area of safety and security include: A project to prepare the 1989 SIRAS Report and assist in upgrading safety reporting under the Section 15 program; grants to prepare video-based training modules for the many bus operators who will be taking the new commercial drivers license skills and knowledge tests and for those who must be prepared to evacuate disabled persons from bus vehicles in an emergency; a continuation of the vital training accomplished under the UMTA cooperative training program; and a State drug demonstration that completes the UMTA national network of State drug program implementation projects.

Project Title: UMTA Cooperative Training Program
Grantee/Contractor: Federal Aviation Administration, Transportation Safety Institute
Location: Oklahoma City, Oklahoma
Funding: \$165,000
Project Monitor: Franz K. Gimmler
Funding Source: Section 6
Project Number: DC-06-0215

Description: Well developed programs and practices that effectively promote safety and security in the transit industry are common to most transit operators. Turnover in safety staffs and constantly changing safety practices are common in the transit industry. Therefore, active training and retraining and refresher programs are needed. A basic core curriculum of safety and security courses, cooperatively administered and financed by UMTA and the transit industry, is offered through this agreement.

Project Title: Overhead Cost Adjustment
Grantee/Contractor: Omega Group, Inc.
Location: Washington, D. C.
Funding: \$9,314
Project Monitor: Roy Field
Funding Source: Section 6
Project Number: DC-06-0477

Description: This contract is to provide an overhead cost adjustment to the project to assess, compile, and summarize information on State and regional programs to regulate public transit safety.

Project Title: Licensing Test Preparation Program
Grantee/Contractor: Amalgamated Transit Union
Location: Washington, D. C.
Funding: \$150,000
Project Monitor: Mary L. Anderson
Funding Source: Section 6
Project Number: DC-06-0629

Description: The Amalgamated Transit Union will develop a commercial driver's licensing test preparation program. This training module will consist of a comprehensive workbook and audio-visual materials to assist bus operators and mechanics in successfully mastering the knowledge and skills test requirements mandated by the Commercial Motor Vehicle Safety Act of 1986.

Project Title: State Drug Demonstration
Grantee/Contractor: Greater Attleboro-Taunton Regional Transit Authority
Location: Attleboro, Massachusetts
Funding: \$75,000 Funding Source: Section 3(a)(1)(C)
Project Monitor: Roy Field Project Number: MA-03-4502

Description: This project will provide technical assistance in the New England States and New York to develop Statewide transit anti-drug programs. The grantee will review and compile available materials and prepare catalogs of drug education and training resources and potential resources for testing services.

Project Title: Prepare SIRAS Report
Grantee/Contractor: Transportation Systems Center
Location: Cambridge, Massachusetts
Funding: \$70,000 Funding Source: Section 6
Project Monitor: Ronald D. Kangas Project Number: MA-06-0194

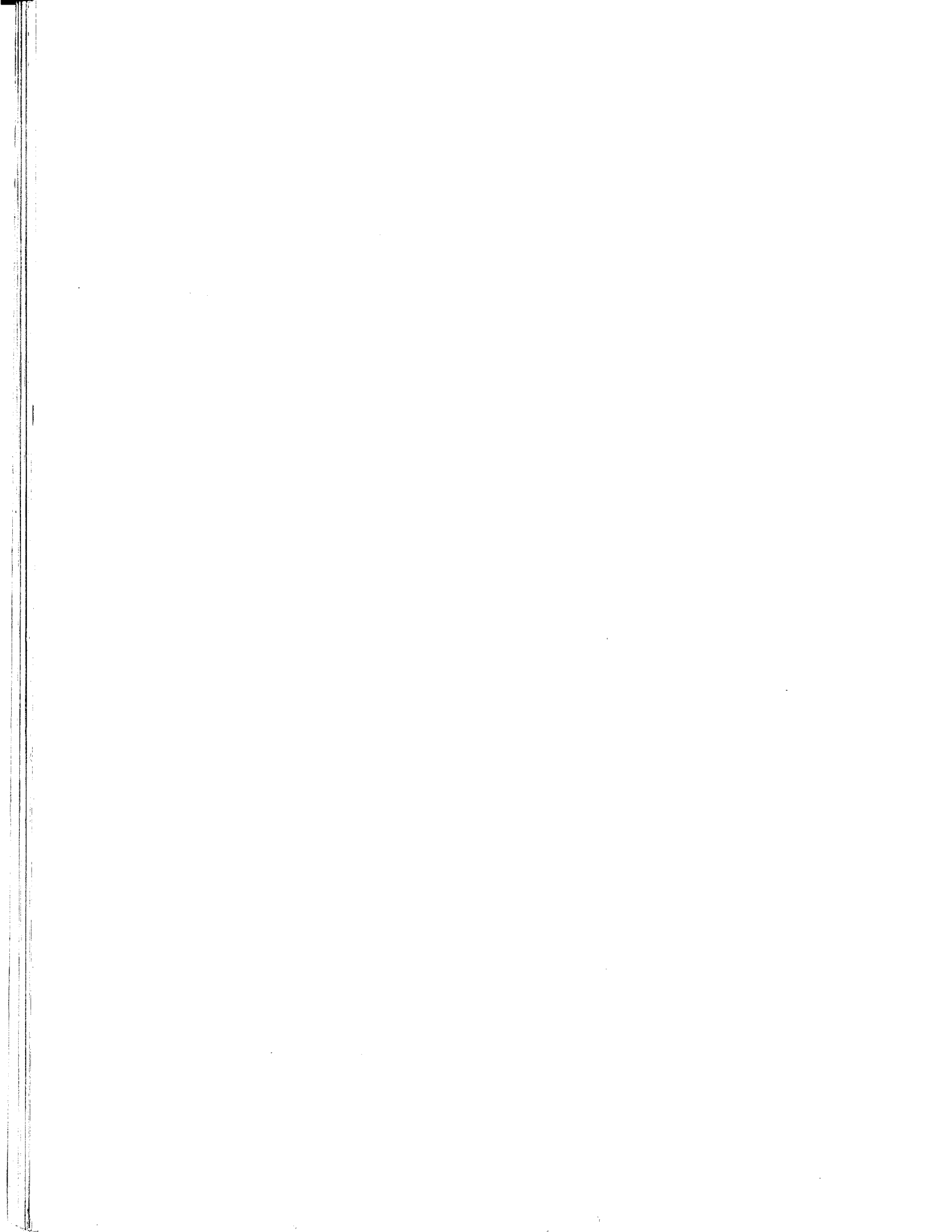
Description: This contract is for preparation of the 1989 Safety Information Reporting and Analysis System (SIRAS) Report for rapid rail systems based on authority-supplied data. It will also support the transition of safety information reporting from SIRAS to Section 15.

Project Title: Amendment Created for Project Closeout
Grantee/Contractor: Mandex Corporation
Location: McLean, Virginia
Funding: \$4,207 Funding Source: Section 6
Project Monitor: Gwendolyn R. Cooper Project Number: VA-06-0088

Description: This operating budget provides new budget authority, carry-over, and recovery authority.

Project Title: Videotape Safety Program
Grantee/Contractor: Snohomish County Public Transportation Benefit Area Corporation
Location: Everett, Washington
Funding: \$100,000 Funding Source: Section 8
Project Monitor: Mary L. Anderson Project Number: WA-08-7001

Description: The Snohomish County Transportation Authority will develop a program to train bus operators in the most efficient and safest methods of emergency evacuation procedures. These procedures may be used in the evacuation of elderly and disabled passengers from small urban, rural, and specialized transportation vehicles. The training program will consist of a comprehensive workbook, an audiovideo tape, and a study workbook.



UNIVERSITY TRANSPORTATION CENTERS PROGRAM

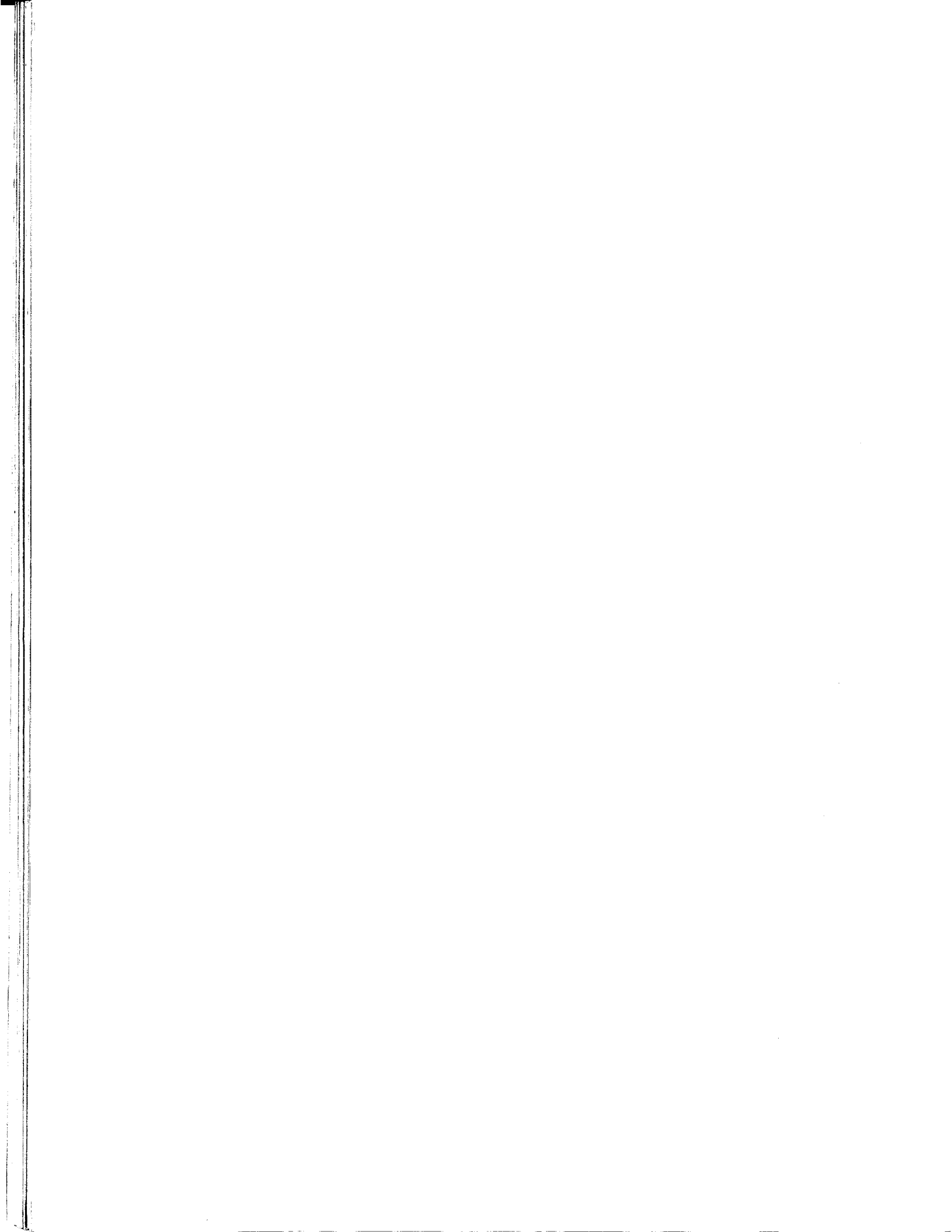
Funding for the University Transportation Centers Program is authorized by the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17). The purpose of the program is to establish and operate one regional transportation center in each of the ten Federal regions which comprise the Standard Federal Regional Boundary System. These Centers will conduct multi-modal research, training, and technology transfer activities concerning the transportation of people and goods. It is anticipated that the Centers will become a focal point and attractor of the Nation's best talent, resources, and facilities for promoting training and innovative research in and across transportation modes and disciplines. The ultimate goal is to establish Centers that, through their own success and momentum, will become self-sustaining by generating broad support from industry and from local, State, and regional governments.

Project Title: University Transportation Centers Program
Grantee/Contractor: Department of Transportation, Office of the Secretary of Transportation
Location: Washington, D. C.
Funding: \$5,000,000 Funding Source: Section 11
Project Monitor: Frank E. Enty Project Number: DC-11-1101

Description: The Office of the Secretary of Transportation will continue to administer the University Transportation Centers Program, as set forth in Section 314 of the Surface Transportation Act of 1987, which authorizes the Secretary to make grants to one or more nonprofit institutions of higher learning. One regional transportation center is to be established in each of the ten Federal regions. The goal of the program is to attract the Nation's best talent to the study of transportation and to develop new strategies to address the Nation's growing transportation related problems.

APPENDIX A

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY PROJECT NUMBER



APPENDIX A

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY PROJECT NUMBER

Section 3(a)(1)(C): The introduction into public transportation service of new technology in the form of innovative and improved products.

CO-03-3501 Denver Regional Transportation District, Denver, 43
MA-03-4502 Greater Attleboro-Taunton Regional Transit Authority,
Attleboro, 49
PA-03-3501 Southeastern Pennsylvania Transportation Authority,
Philadelphia, 45

Section 4(i): Grants to State and local public bodies for projects for the deployment of innovative techniques and methods in the management and operation of public transportation services.

ME-03-4500 Maine Department of Transportation, Augusta, 12
VA-03-4501 Tidewater Transportation District Commission, Norfolk, 13

Section 6: Research, development, and demonstration projects in all phases of urban mass transportation to improve mass transportation service and contribute toward meeting total urban transportation needs effectively and safety.

CA-06-0094 Rohr Industries, Inc., Chula Vista, 43
CA-06-0239 City and County of San Francisco Public Utilities
Commission, San Francisco, 20
CA-06-0241 Alameda-Contra Costa District Transit, Oakland, 43
CO-06-0028 Greater Denver Chamber of Commerce, Denver, 4
DC-06-0215 Federal Aviation Administration, Transportation Safety
Institute, Oklahoma City, 48
DC-06-0409 Public Technology, Inc., Washington, 20
DC-06-0424 American Public Transit Association, Washington, 12
DC-06-0477 Omega Group, Inc., Washington, 48
DC-06-0566 Department of Energy, Washington, 43
DC-06-0599 National Easter Seal Society, Washington, 34
DC-06-0610 Transportation Research Board, National Academy of
Sciences, Washington, 20
DC-06-0612 Peat, Marwick, Mitchell and Company, Washington, 5
DC-06-0621 Rural America, Washington, 34
DC-06-0629 Amalgamated Transit Union, Washington, 48
FL-06-0052 Florida Department of Transportation, Tallahassee, 5
GA-06-0021 Cobb County Department of Transit, Marietta, 12
IL-06-0076 Howard/Paulina Development Corporation, Chicago, 16
IL-06-0077 Chicago Transit Authority, Chicago, 44
IT-06-0273 Lea Transportation Research Corporation, Chantilly,
Virginia, 38

Section 6 (continued)

IT-06-0314 Lea, Elliott, McGean and Company, Chantilly, Virginia, 44
KY-06-0005 Council of State Governments, Lexington, 5
MA-06-0171 Transportation Systems Center, Cambridge, 5
MA-06-0175 Dynatrend, Inc., Woburn, 38
MA-06-0188 Harvard University, Cambridge, 17
MA-06-0189 Dynatrend, Inc., Woburn, 6
MA-06-0190 Metropolitan Area Planning Council, Boston, 6
MA-06-0194 Transportation Systems Center, Cambridge, 49
MD-06-0049 Price Williams and Associates, Inc., Silver Spring, 7
MD-06-0135 Booz, Allen & Hamilton, Inc., Applied Research, Bethesda, 7
MD-06-0139 International Taxicab Association, Kensington, 12
MT-06-0004 Montana Department of Commerce, Helena, 35
NJ-06-0028 Fairleigh Dickinson University, College of Science and
Engineering, Teaneck, 38

NY-06-0149 City University of New York, New York, 17
NY-06-0150 Polytechnic University, Brooklyn, 39
OH-06-0056 Battelle Memorial Institute Columbus Laboratories,
Columbus, 45

VA-06-0124 Comsis Corporation, Silver Spring, Maryland, 13
VA-06-0139 Tysons Corner Transportation Association, Inc., Tysons
Corner, 9
VA-06-0143 Greater Richmond Transit Company, Richmond, 46

Section 8:

Development of transportation plans and programs which are formulated on the basis of transportation needs with due consideration to comprehensive long-range land use plans, development objectives, and their probable effect on the future development of urban areas of more than fifty thousand population.

AZ-08-7001 Maricopa Association of Governments, Phoenix, 16
CA-08-7001 San Diego Association of Governments, San Diego, 4
CT-08-7001 State of Connecticut Department of Transportation,
Wethersfield, 4

DC-08-7001 Peat, Marwick, Mitchell and Company, Washington, 44
DC-08-7003 Federal Highway Administration, Washington, 44
GA-08-7002 Atlanta Regional Commission, Atlanta, 38
IL-08-7002 Chicago Transit Authority, Chicago, 16
MA-08-7004 Southeastern Regional Planning and Economic Development
District, Taunton, 6

MA-08-7005 Massachusetts Bay Transit Authority, Boston, 7
NJ-08-7003 Morris County Board of Chosen Freeholders, Morristown, 7
NY-08-7007 City University of New York, New York, 39
OH-08-7001 Battelle Memorial Institute Columbus Laboratories,
Columbus, 17

OH-08-7002 Mid-Ohio Regional Planning Commission, Columbus, 8
PA-08-7002 Erie Metropolitan Transit Authority, Erie, 8
TX-08-7003 Houston-Galveston Area Council, Houston, 8
WA-08-7001 Snohomish County Public Transportation Benefit Area
Corporation, Everett, 49

Section 10:

Grants to States, local bodies, and agencies thereof (and operators of public transportation services) to provide fellowships for training of professional employees in managerial, technical, and professional positions in the public transportation field.

AL-10-0012	Birmingham-Jefferson County Transit Authority, Birmingham, 24
CA-10-0321	Santa Cruz Metropolitan Transit District, Santa Cruz, 24
CA-10-0322	San Francisco Bay Area Rapid Transit, Oakland, 24
CA-10-0323	Southern California Rapid Transit District, Los Angeles, 24
CA-10-0324	Orange County Transit District, Garden Grove, 25
CO-10-0023	Colorado Department of Highways, Denver, 25
FL-10-0098	Lakeland Area Mass Transit District, Lakeland, 25
MI-10-0087	Ann Arbor Transportation Authority, Ann Arbor, 25
MN-10-0046	Duluth Transit Authority, Duluth, 26
OH-10-0162	Greater Cleveland Regional Transit Authority, Cleveland, 26
PA-10-0114	Southeastern Pennsylvania Transportation Authority, Philadelphia, 26
WA-10-0109	Washington State Department of Transportation, Olympia, 26
WI-10-0055	Wisconsin Department of Transportation, Madison, 27

Section 11(a):

Grants to public and private nonprofit institutions of higher learning to assist in establishing or carrying on comprehensive research in the problems of transportation in urban areas.

FL-11-0017	Miami-Dade County Community College, Miami, 20
GA-11-0020	Georgia Institute of Technology Research Corporation, Atlanta, 30
IA-11-0008	Iowa State University, Ames, 30
IL-11-0033	Northwestern University, Evanston, 30
MA-11-0049	Massachusetts Institute of Technology, Cambridge, 30
NC-11-0016	North Carolina A&T State University, Greensboro, 31
NJ-11-0013	Essex County College of Higher Education, Newark, 21
NY-11-0041	Borough of Manhattan Community College, New York, 21
PA-11-0035	University of Pennsylvania, Philadelphia, 31
VA-11-0018	George Mason University, Fairfax, 9
WI-11-00132	University of Wisconsin at Milwaukee, Milwaukee, 31

Section 11(b):

Grants to one or more nonprofit institutions of higher learning to establish and operate one regional transportation center in each of the ten Federal regions which comprise the Standard Federal Regional Boundary System.

DC-11-1101	Department of Transportation, Office of the Secretary, Washington, 52
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Section 18:

Funding for public transportation projects in other than urbanized areas allocated on a formula basis.

IL-18-X902

American Public Works Association, Chicago, 34

Section 317:

Federal Mass Transportation Act of 1987: Establishment of a facility for testing new bus models for maintainability, reliability, safety, performance, structural integrity, fuel economy, and noise.

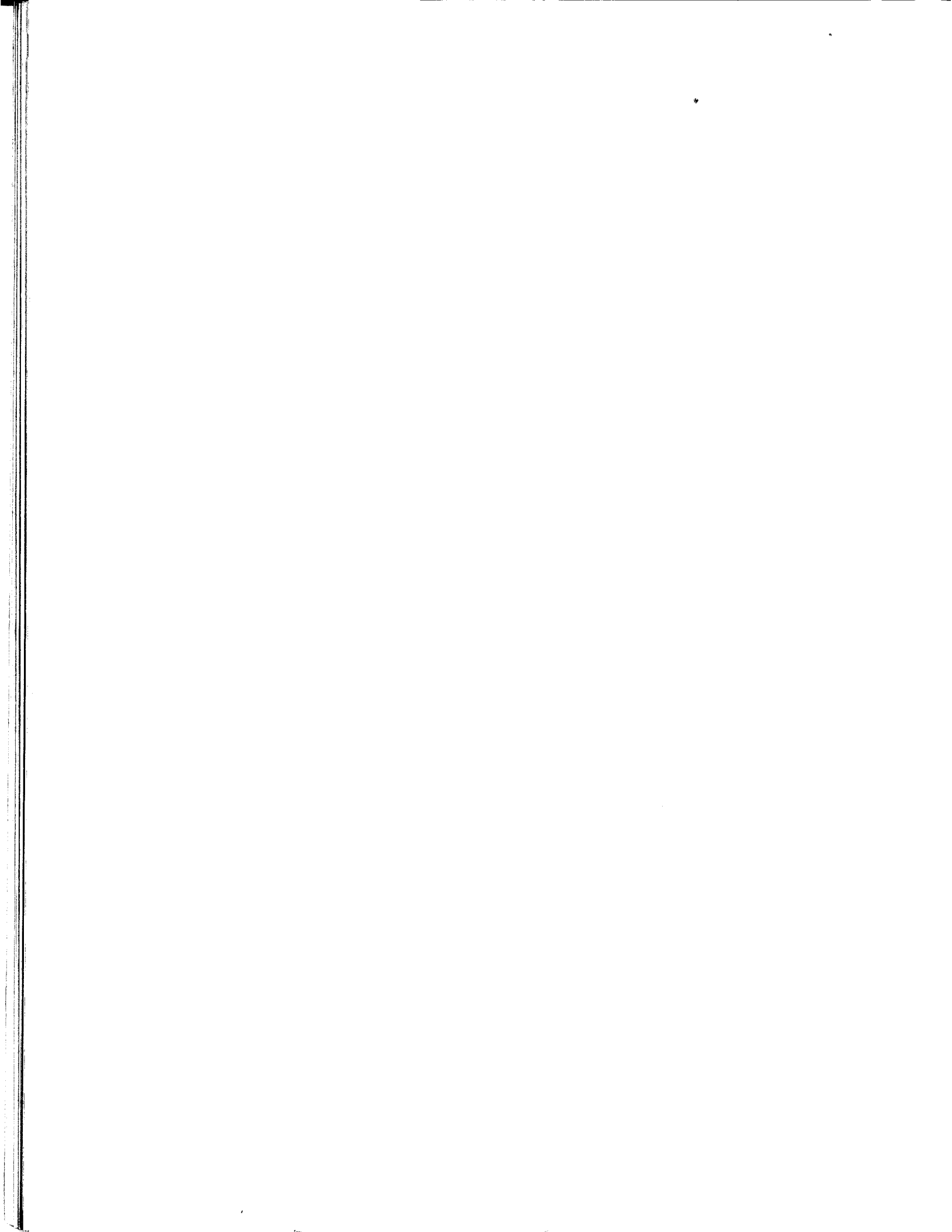
PA-31-0001

Pennsylvania State University, State College, 45

PA-31-1198

Altoona Area Vocational-Technical School, Altoona, 45

APPENDIX B
TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY STATE



APPENDIX B

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY STATE

Alabama

AL-10-0012 Birmingham-Jefferson County Transit Authority, Birmingham, 24

Arizona

AZ-08-7001 Maricopa Association of Governments, Phoenix, 16

California

CA-06-0094 Rohr Industries, Inc., Chula Vista, 43

CA-06-0239 City and County of San Francisco Public Utilities Commission, San Francisco, 20

CA-06-0241 Alameda-Contra Costa District Transit, Oakland, 43

CA-08-7001 San Diego Association of Governments, San Diego, 4

CA-10-0321 Santa Cruz Metropolitan Transit District, Santa Cruz, 24

CA-10-0322 San Francisco Bay Area Rapid Transit District, Oakland, 24

CA-10-0323 Southern California Rapid Transit District, Los Angeles, 24

CA-10-0324 Orange County Transit District, Garden Grove, 25

Colorado

CO-03-3501 Denver Regional Transportation District, Denver, 43

CO-06-0028 Greater Denver Chamber of Commerce, Denver, 4

CO-10-0023 Colorado Department of Highways, Denver, 25

Connecticut

CT-08-7001 State of Connecticut Department of Transportation, Wethersfield, 4

District of Columbia

DC-06-0215 Federal Aviation Administration, Transportation Safety Institute, Oklahoma City, Oklahoma, 48

DC-06-0409 Public Technology, Inc., Washington, 20

DC-06-0424 American Public Transit Association, Washington, 12

DC-06-0477 Omega Group, Inc., Washington, 48

DC-06-0566 Department of Energy, Washington, 43

DC-06-0599 National Easter Seal Society, Washington, 34

DC-06-0610 Transportation Research Board, National Academy of Sciences, Washington, 20

DC-06-0612 Peat, Marwick, Mitchell and Company, Washington, 5

DC-06-0621 Rural America, Washington, 34

DC-06-0629 Amalgamated Transit Union, Washington, 48

DC-08-7001 Peat, Marwick, Mitchell and Company, Washington, 44

DC-08-7003 Federal Highway Administration, Washington, 44

DC-11-1101 Department of Transportation, Office of the Secretary, Washington, 52

Florida

FL-06-0052 Florida Department of Transportation, Tallahassee, 5
FL-10-0098 Lakeland Area Mass Transit District, Lakeland, 25
FL-11-0017 Florida-Dade Community College, Miami, 20

Georgia

GA-06-0021 Cobb County Department of Transit, Marietta, 12
GA-08-7002 Atlanta Regional Commission, Atlanta, 38
GA-11-0020 Georgia Institute of Technology, Atlanta, 30

Illinois

IL-06-0076 Howard/Paulina Development Corporation, Chicago, 16
IL-06-0077 Chicago Transit Authority, Chicago, 44
IL-08-7002 Chicago Transit Authority, Chicago, 16
IL-11-0033 Northwestern University, Evanston, 30
IL-18-X902 American Public Works Administration, Chicago, 34

Iowa

IA-11-0008 Iowa State University, Ames, 30

Kentucky

KY-06-0005 Council of State Governments, Lexington, 5

Maine

ME-03-4500 Maine Department of Transportation, Augusta, 12

Maryland

MD-06-0049 Price Williams and Associates, Inc., Silver Spring, 7
MD-06-0135 Booz, Allen & Hamilton, Inc., Applied Research, Bethesda, 7
MD-06-0139 International Taxicab Association, Kensington, 12
VA-06-0124 Comsis Corporation, Silver Spring, 13

Massachusetts

MA-03-4502 Greater Attleboro-Taunton Regional Transit Authority,
Attleboro, 49
MA-06-0171 Transportation Systems Center, Cambridge, 5
MA-06-0175 Dynatrend, Inc., Woburn, 38
MA-06-0188 Harvard University, Cambridge, 17
MA-06-0189 Dynatrend, Inc., Woburn, 6
MA-06-0190 Metropolitan Area Planning Council, Boston, 6
MA-06-0194 Transportation Systems Center, Cambridge, 49
MA-08-7004 Southeastern Regional Planning and Economic Development District,
Taunton, 6
MA-08-7005 Massachusetts Bay Transit Authority, Boston, 7
MA-11-0049 Massachusetts Institute of Technology, Cambridge, 30

Michigan

MI-10-0087 Ann Arbor Transportation Authority, Ann Arbor, 25

Minnesota

MN-10-0046 Duluth Transit Authority, Duluth, 26

Montana

MT-06-0004 Montana Department of Commerce, Helena, 35

New Jersey

NJ-06-0028 Fairleigh Dickinson University, College of Science and Engineering, Teaneck, 38
NJ-08-7003 Morris County Board of Chosen Freeholders, Morristown, 7
NJ-11-0013 Essex County College of Higher Education, Newark, 21

New York

NY-06-0149 City University of New York, New York, 17
NY-06-0150 Polytechnic University, Brooklyn, 39
NY-08-7007 City University of New York, New York, 39
NY-11-0041 Borough of Manhattan Community College, New York, 21

North Carolina

NC-11-0016 North Carolina A&T State University, Greensboro, 31

Ohio

OH-06-0056 Battelle Memorial Institute Columbus Laboratories, Columbus, 45
OH-08-7001 Battelle Memorial Institute Columbus Laboratories, Columbus, 17
OH-08-7002 Mid-Ohio Regional Planning Commission, Columbus, 8
OH-10-0162 Greater Cleveland Regional Transit Authority, Cleveland, 26

Pennsylvania

PA-03-3501 Southeastern Pennsylvania Transportation Authority, Philadelphia, 45
PA-08-7002 Erie Metropolitan Transit Authority, Erie, 8
PA-10-0114 Southeastern Pennsylvania Transportation Authority, Philadelphia, 26
PA-11-0035 University of Pennsylvania, Philadelphia, 31
PA-31-0001 Pennsylvania State University, State College, 45
PA-31-1198 Altoona Area Vocational-Technical School, Altoona, 45

Texas

TX-08-7003 Houston-Galveston Area Council, Houston, 8

Virginia

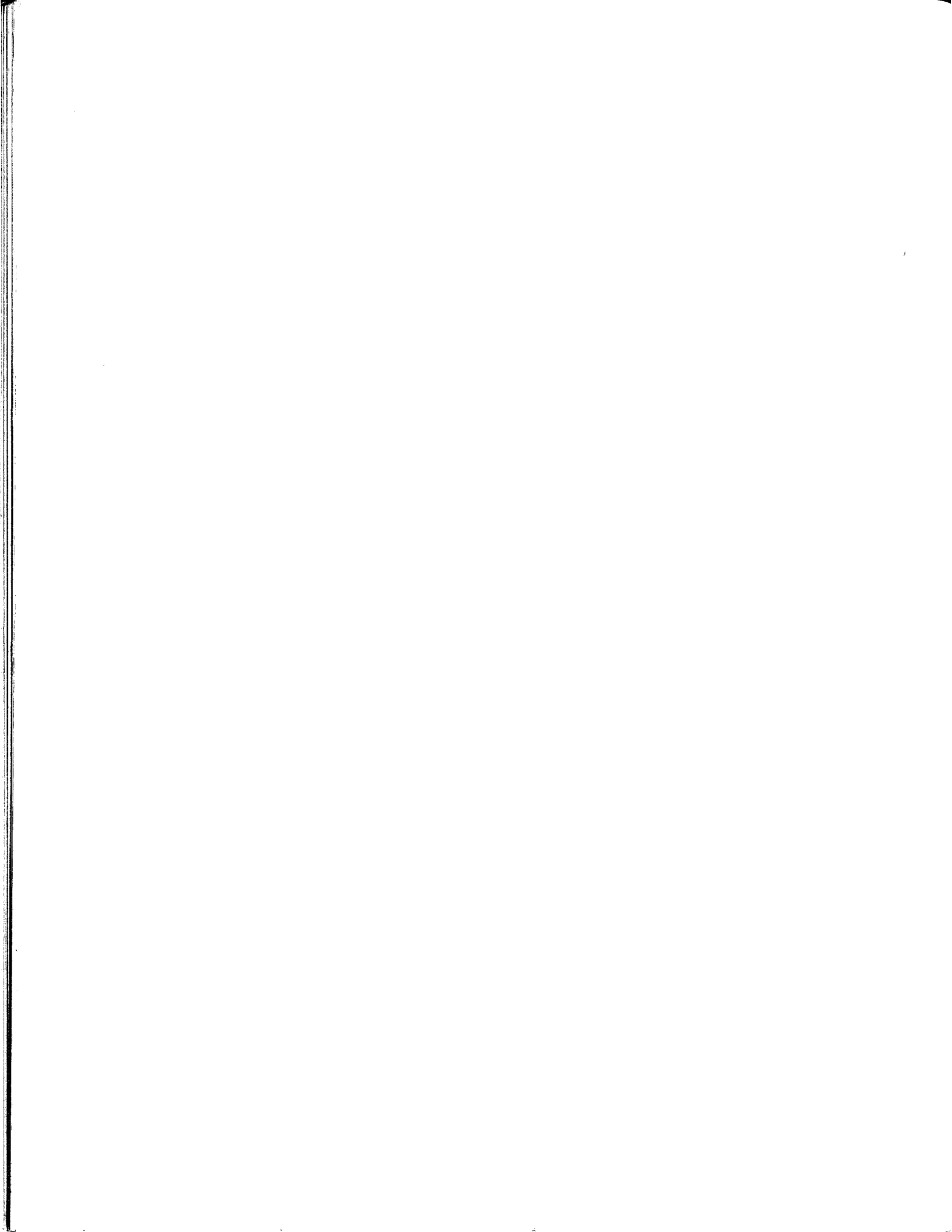
IT-06-0273 Lea Transportation Research Corporation, Chantilly, 38
IT-06-0314 Lea, Elliott, McGean and Company, Chantilly, 44
VA-03-4501 Tidewater Transportation District Commission, Norfolk, 13
VA-06-0073 The Mitre Corporation, McLean, 46
VA-06-0088 Mandex Corporation, McLean, 49
VA-06-0139 Tysons Corner Transportation Association, Inc., Tysons Corner, 9
VA-06-0143 Greater Richmond Transit Company, Richmond, 46
VA-11-0018 George Mason University, Fairfax, 9

Washington

WA-08-7001 Snohomish County Public Transportation Benefit Area Corporation, Everett, 49
WA-10-0109 Washington State Department of Transportation, Olympia, 26

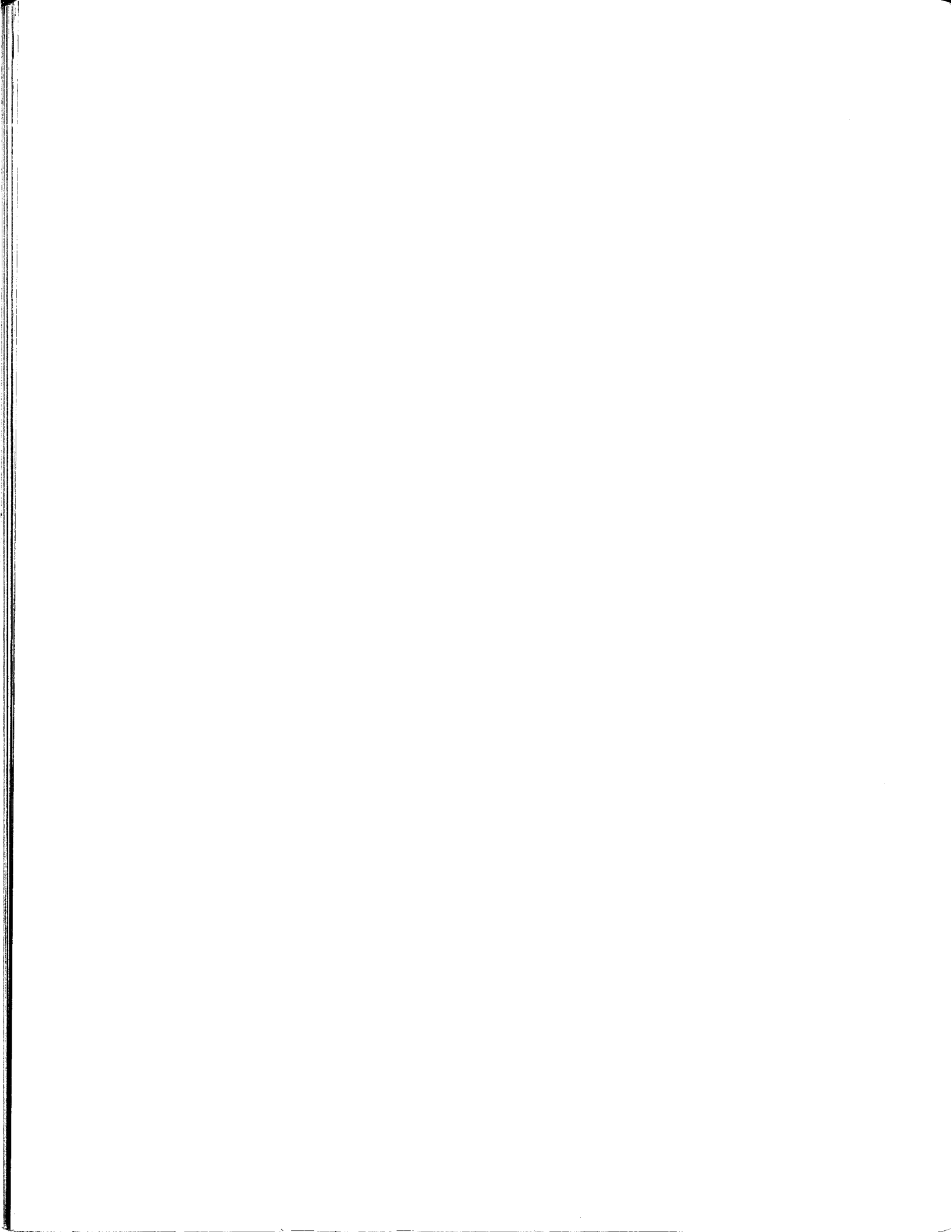
Wisconsin

WI-10-0055 Wisconsin Department of Transportation, Madison, 27
WI-11-0012 University of Wisconsin at Milwaukee, Milwaukee, 31



APPENDIX C

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY GRANTEE/CONTRACTOR



APPENDIX C

TECHNICAL ASSISTANCE AND SAFETY PROJECTS BY GRANTEE/CONTRACTOR

Alameda-Contra Costa District Transit, Oakland: CA-06-0241, 43
Altoona Area Vocational-Technical School, Altoona: PA-31-1198, 45
Amalgamated Transit Union, Washington: DC-06-0629, 48
American Public Transit Association, Washington: DC-06-0424, 12
American Public Works Association, Chicago: IL-18-X902, 34
Ann Arbor Transportation Authority, Ann Arbor: MI-10-0087, 25
Atlanta Regional Commission, Atlanta: GA-08-7002, 38
Attleboro-Taunton Regional Transit Authority, Greater, Attleboro:
MA-03-4502, 49

Battelle Memorial Institute Columbus Laboratories, Columbus: OH-06-0056, 44;
OH-08-7001, 17
Birmingham-Jefferson County Transit Authority, Birmingham: AL-10-0012, 24
Booz, Allen & Hamilton, Inc., Applied Research, Bethesda: MD-06-0135, 7

Chicago Transit Authority, Chicago: IL-06-0077, 44; IL-08-7002, 16
Cleveland Regional Transit Authority, Greater, Cleveland: OH-10-0162, 26
Cobb County Department of Transit, Marietta: GA-06-0021, 12
Colorado Department of Highways, Denver: CO-10-0023, 25
Comsis Corporation, Silver Spring, Maryland: VA-06-0124, 13
Connecticut Department of Transportation, State of, Wethersfield:
CT-08-7001, 4
Council of State Governments, Lexington: KY-06-0005, 5

Denver Chamber of Commerce, Greater, Denver: CO-06-0028, 4
Denver Regional Transportation District, Denver: CO-03-3501, 43
Duluth Transit Authority, Duluth: MN-10-0046, 26
Dynatrend, Inc., Woburn: MA-06-0175, 36; MA-06-0189, 6

Energy, Department of, Washington: DC-06-0566, 43
Erie Metropolitan Transit Authority, Erie: PA-08-7002, 8
Essex County College of Higher Education, Newark: NJ-11-0013, 21

Fairleigh Dickinson University, College of Science and Engineering, Teaneck:
NJ-06-028, 38
Federal Aviation Administration, Transportation Safety Institute, Oklahoma
City, Oklahoma: DC-06-0215, 48
Federal Highway Administration, Washington: DC-08-7003, 44
Florida Department of Transportation, Tallahassee: FL-06-0052, 5

George Mason University, Fairfax: VA-11-0018, 9
Georgia Institute of Technology Research Corporation, Atlanta: GA-11-0020, 30

Harvard University, Cambridge: MA-06-0188, 17
 Houston-Galveston Area Council, Houston: TX-08-7003, 8
 Howard/Paulina Development Corporation, Chicago: IL-06-0076, 16

 Iowa State University, Ames: IA-11-0008, 30
 International Taxicab Association, Kensington: MD-06-0139, 12

 Lakeland Area Mass Transit District, Lakeland: FL-10-0098, 25
 Lea, Elliott, McGean and Company, Chantilly, Virginia: IT-06-0314, 44
 Lea Transportation Research Corporation, Chantilly, Virginia: IT-06-0273, 38

 Maine Department of Transportation, Augusta: ME-03-4500, 12
 Mandex Corporation, McLean: VA-06-0088, 49
 Manhattan Community College, Borough of, New York: NY-11-0041, 121
 Maricopa Association of Governments, Phoenix: AZ-08-7001, 16
 Massachusetts Bay Transit Authority, Boston: MA-08-7005, 7
 Massachusetts Institute of Technology, Cambridge: MA-11-0049, 30
 Metropolitan Area Planning Council, Boston: MA-06-0190, 6
 Miami-Dade County Community College, Miami: FL-11-0017, 20
 Mid-Ohio Regional Planning Commission, Columbus: OH-08-7002, 8
 Mitre Corporation, The, McLean: VA-06-0073, 46
 Montana Department of Commerce, Helena: MT-06-0004, 35
 Morris County Board of Chosen Freeholders, Morristown: NJ-08-7003, 7

 National Easter Seal Society, Inc., Washington: DC-06-0599, 34
 New York, City University of, New York: NY-06-0149, 17; NY-08-7007, 39
 North Carolina A&T State University, Greensboro: NC-11-0016, 31
 Northwestern University, Evanston: IL-11-0033, 30

 Omega Group, Inc., Washington: DC-06-0477, 48
 Orange County Transit District, Garden Grove: CA-10-0324, 25

 Peat, Marwick, Mitchell and Company, Washington: DC-06-0612, 5; DC-08-7001, 44
 Pennsylvania State University, State College: PA-31-0001, 45
 Pennsylvania, University of, Philadelphia: PA-11-0035, 31
 Polytechnic University, Brooklyn: NY-06-0150, 39
 Price Williams and Associates, Inc., Silver Spring: MD-06-0049, 7
 Public Technology, Inc., Washington: DC-06-0409, 20

 Richmond Transit Company, Greater, Richmond: VA-06-0143, 46
 Rohr Industries, Inc., Chula Vista: CA-06-0094, 43
 Rural America, Washington: DC-06-0621, 34

 San Diego Association of Governments, San Diego: CA-08-7001, 4
 San Francisco Bay Area Rapid Transit District, Oakland: CA-10-0322, 24
 San Francisco Public Utilities Commission, City and County of, San Francisco:
 CA-06-0239, 20
 Santa Cruz Metropolitan Transit District, Santa Cruz: CA-10-0321, 24
 Snohomish County Public Transportation Benefit Area Corporation, Everett:
 WA-08-7001, 49
 Southeastern Pennsylvania Transportation Authority, Philadelphia:
 PA-03-3501, 45; PA-10-0114, 26

Southeastern Regional Planning and Economic Development District, Taunton:
MA-08-7004, 6

Southern California Rapid Transit District, Los Angeles: CA-10-0323, 24

Tidewater Transportation District Commission, Norfolk: VA-03-4501, 13

Transportation Research Board, National Academy of Sciences, Washington:
DC-06-0610, 20

Transportation Systems Center, Cambridge: MA-06-0171, 5; MA-06-0194, 49

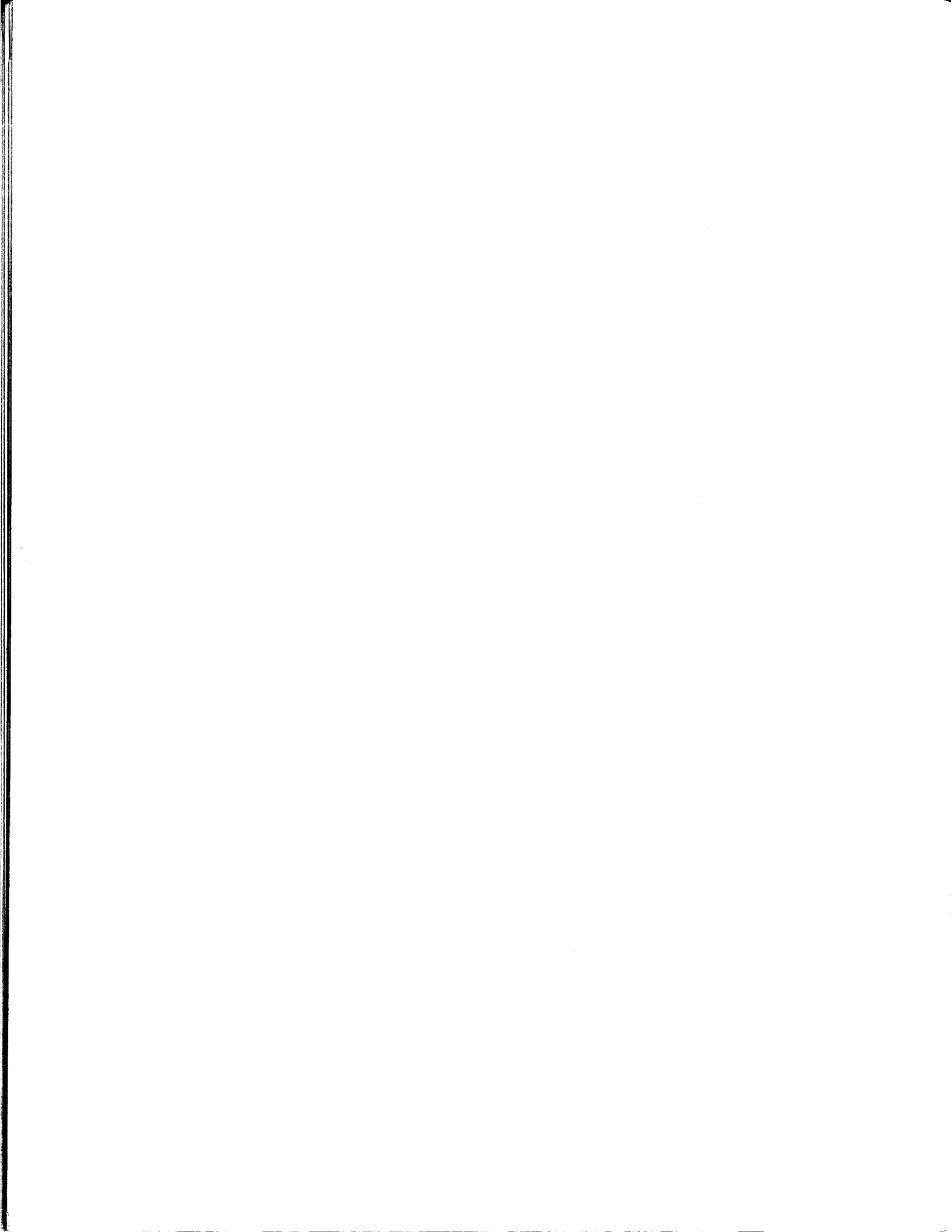
Transportation, Department of, Office of the Secretary, Washington:
DC-11-1101, 52

Tysons Corner Transportation Association, Inc., Tysons Corner: VA-06-0139, 9

Washington Department of Transportation, Olympia: WA-10-0109, 26

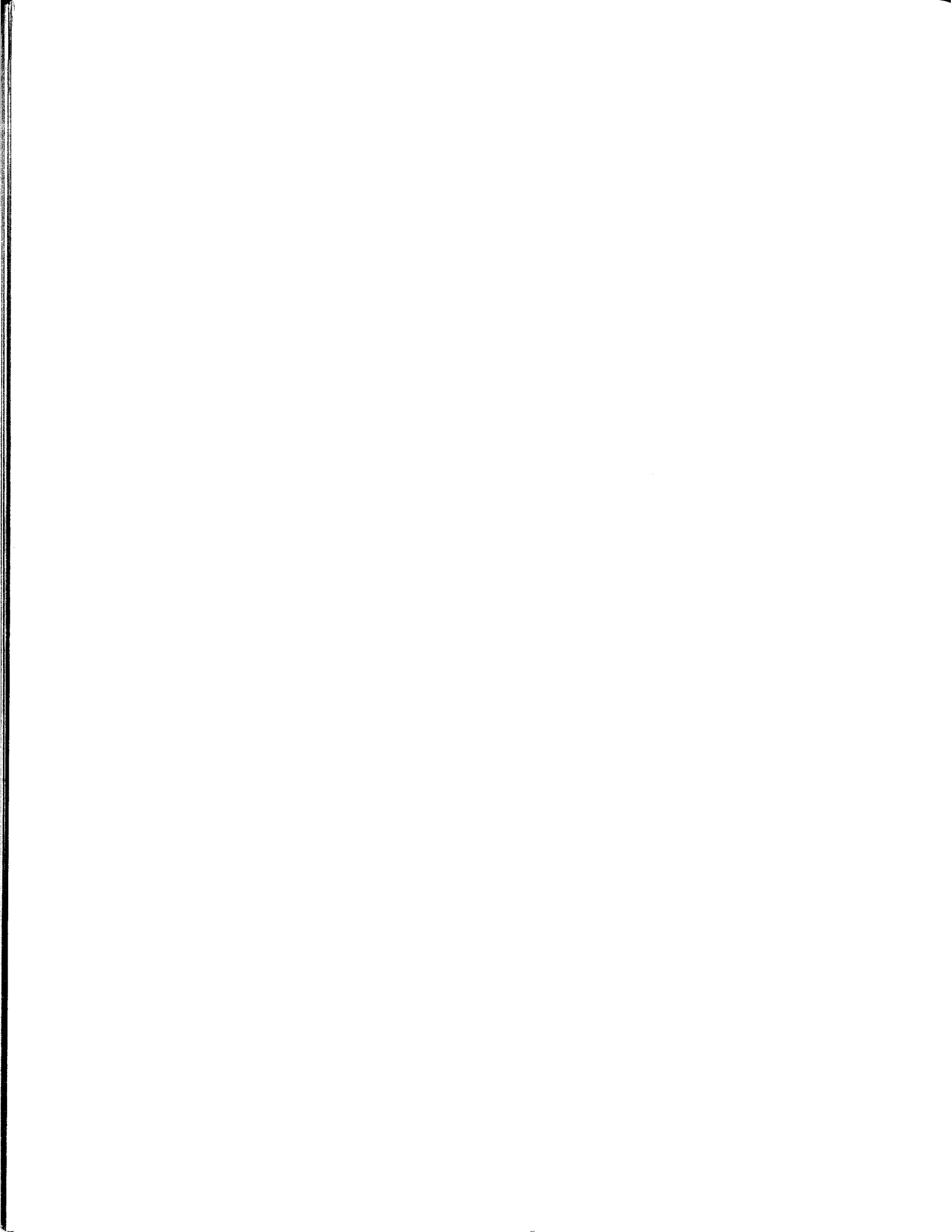
Wisconsin Department of Transportation, Madison: WI-10-0055, 27

Wisconsin, University of, at Milwaukee, Milwaukee: WI-11-0012, 31



APPENDIX D

OFFICE OF TECHNICAL ASSISTANCE AND SAFETY PROJECT MONITORS



APPENDIX D

OFFICE OF TECHNICAL ASSISTANCE AND SAFETY PROJECT MONITORS

Inquiries regarding projects listed herein may be directed to the project monitor at the organization shown below, c/o Office of Technical Assistance and Safety, Urban Mass Transportation Administration, Washington, D. C. 20590.

<u>Name</u>	<u>Organization</u>
Adams, Ross W.	Office of Mobility Enhancement
Ahmed, Abdo S.	Office of Engineering Evaluations
Anderson, Mary L.	Office of Safety
Arrillaga, Bert	Research and Rural Transportation Division
Barsony, Steven A.	Office of Engineering Evaluations
Boenau, Ronald	Training and Information Division
Caruso, Salvator	Capital Development Division
Cass, Patricia	Service Assistance Division
Chambers, Irving	Office of Engineering Evaluations
Cooper, Gwendolyn R.	Capital Development Division
Durham, John S.	Capital Development Division
Enty, Frank E.	Office of Training, Research & Rural Transportation
Field, Roy	Office of Safety
Gimmler, Franz K.	Deputy Associate Administrator for Safety
Goodman, Joseph M.	Service Assistance Division
Hsiung, Shang Q.	Office of Engineering Evaluations
Izumi, George I.	Office of Engineering Evaluations
Kangas, Ronald D.	Office of Safety
McKeown, Stewart N.	Research and Rural Transportation Division
Mora, Jeffrey G.	Office of Engineering Evaluations
Morison, Charles T.	Training and Information Division
Tann, Helen M.	Training and Information Division
Tate, Roger	Research and Rural Transportation Division
Thomas, Edward L.	Capital Development Division
Trotter, Robert R.	Research and Rural Transportation Division