



2000

A REPORT TO OUR CUSTOMERS



Celebrating
The Federal
Investment
In



TRANSIT

A MESSAGE FROM THE ACTING ADMINISTRATOR

Americans benefit from transit as passengers and consumers. With

assistance from the Federal transit program, transit operators across the country provide safe, reliable and dependable public transportation – low cost mobility to those in need, reduced congestion for transportation system users, cleaner air and a better quality of life for the community as a whole. Transit gets people where they need to go in a cost-efficient, sensible manner.

This “Report to Our Customers” is an accounting of the progress of the Federal transit program over the past several years—a snapshot of the state of the industry as we begin the 21st Century—and a look forward at the exciting things yet to come.



President John F. Kennedy signed legislation beginning this journey in June of 1961, enabling the Federal Government to assist struggling transit systems come back from the brink of financial crisis. Today, a vital transit industry in our large cities, suburban and rural communities is an element of a balanced transportation system helping build more livable communities in every state of the nation—making America into a place where we and our children can live and work and play and study and grow.

Everyone at the Federal Transit Administration is committed to a careful and responsible stewardship of the capital and formula assistance programs we manage. We help millions of people travel every day, help the elderly and those with disabilities and encourage innovative techniques to assist local public transportation providers better manage their transit systems.

FTA is an agency on the move. And we’re moving forward day by day.

A handwritten signature in blue ink that reads "Nuria I. Fernandez".

Nuria I. Fernandez

Acting Administrator

O V E R V I E W

WHERE WE ARE, THE PROGRESS WE HAVE MADE,
THE CHALLENGE AHEAD

Every day of the year, America's more than 6,000 transit providers receiving federal transit assistance put more than 130,000 buses, vans and special service vehicles on the street, dispatch nearly 5,000 commuter rail passenger cars, operate more than 10,000 subway cars and provide more than 2,000 dependable light rail transit and trolley bus vehicles.



In 1999, for the first time since the beginning of the Federal transit assistance program, annual ridership exceeded nine billion passengers. It continues to grow.

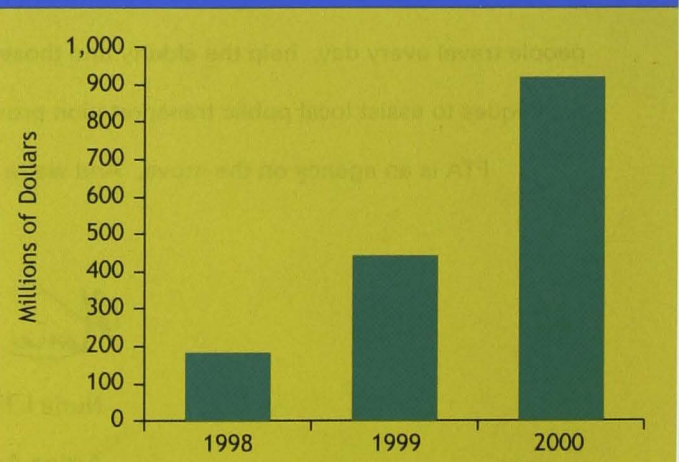
In our "Report on the Conditions and Performance of the Nation's Surface Transportation Systems," released in May 2000, U.S. Transportation Secretary Rodney E. Slater noted the progress of our nation's transit systems: "Record levels of highway and transit investment, \$34.5 billion in 2000 alone, have greatly improved transportation safety and enhanced system conditions, but further progress is necessary in the new century and the new millennium. Public investment in surface

transportation is at its highest level ever. This report illustrates how our record levels of investment have paid off in enhanced safety, which is our highest transportation priority, and an improved surface transportation system. The report also makes clear, however, more still needs to be done."

Total spending on transit was \$25.1 billion in 1997, a 5.5 percent increase over 1995.

Of that total, \$7.6 billion was spent for capital improvements, an increase of 8.6 percent. The Federal Government contributed 27 percent of public funding for transit, up from 25 percent in 1995. While the Transportation Equity Act for the 21st Century (TEA-21) provides a

Preventive Maintenance

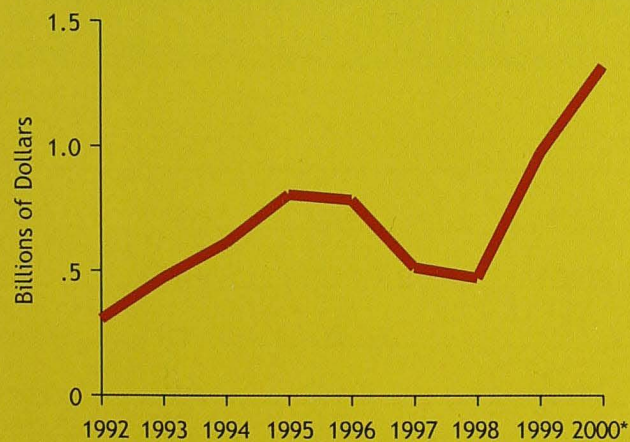


significant increase in funding, there will still be a 12.9 percent gap by the end of TEA-21 between the resources needed to maintain—just maintain—the conditions and performance of the nation's transit systems and the resources that are available. Some of those systems are 100 years old. Some are relatively new. And some are just being developed. But regardless of their age, every bus, every rail car, every light rail and paratransit vehicle—and the shops and yards that maintain them—needs us to invest in their upkeep every day so they can perform their function of providing safe, efficient and convenient mobility to the people of America.



One relatively new way for our communities to address their transit needs is to take advantage of the flexibility provided first by the Intermodal Surface Transportation Efficiency Act (ISTEA) and now TEA-21 in using surface transportation funds for locally determined priorities. Fiscal year 2000 is already at an all-time high in terms of funds “flexed” for transit—\$1.3 billion has already been transferred this year. Since the beginning of the program nationally, \$6.2 billion has been transferred.

Flex Fund Transfers By Year 1992-2000



* Through July 31, 2000

To protect the public's investment in mass transit, FTA proposed, and Congress agreed, that grant funds could be used for major overhauls of capital equipment. FTA grantees are choosing this option to ensure safe, reliable rolling stock.

Total Federal funds to provide bus and train service have grown substantially since 1992, from \$3.6 billion to nearly \$6 billion in 2000.

W H O W E A R E

We are a 485-person U.S. Government agency

whose vision is *People Moving People Into America's Future.*

FTA is one of the modal administrations within the U.S.

Department of Transportation; we work with our sister agencies

to provide enhanced customer service and heightened

intermodal planning and approaches to transportation solutions.



FTA provides leadership, technical assistance and financial resources for safe,

technologically advanced public transportation to enhance mobility and

accessibility, improve the nation's communities and natural environment and

strengthen the national economy. We are the principal source of Federal financial

assistance to America's communities for the planning, development and

improvement of public transportation systems, as authorized by TEA-21. For details on the

programs FTA administers, please see the companion piece, **"This is FTA."**

B E N E F I T S F O R A L L A M E R I C A

The Federal Transit Program provides benefits for all Americans who use transit regularly, as well as those who do not. Ten million Americans use transit each working day. Another 25 million Americans use transit less frequently, but on a regular basis. By providing users a cost-effective and convenient transportation option, public transit eases traffic congestion for millions of motorists. Federal gas taxes help support local transit systems through the Federal program. The nation's \$40 billion in annual traffic congestion losses would be \$60 billion—\$20 billion higher—were it not for transit. In fact, if all the Americans who take transit to work decided to drive, their cars would circle the Earth with a line of traffic 23,000 miles long—every day.

FTA's stewardship of the transit assistance program reflects Secretary Slater's mandate for the U.S. Department of Transportation to be "visionary and vigilant, committed to excellence in service to the American people." The program of financial assistance for state and local providers that operate public mass transportation services for the people of America has had an important daily effect not only on the transportation habits of millions of American people, but on the quality of life in cities, towns and rural areas from coast to coast.

Table 1: National Summary Statistics for Federally Funded Rural Transit Programs

	1994 (1)		1998 (2)		Percent Change	
	Mean	Median	Mean	Median	Mean	Median
Fleet Size	11	6	15	7	33.54%	16.67%
Annual Ridership	82,196	33,274	147,146	47,273	79.02%	42.07%
Annual Budget	\$315,000	\$153,500	\$488,040	\$205,071	54.93%	33.60%
Annual Trips/Vehicle	7,875	5,395	9,671	5,200	22.81%	-3.61%
Annual Cost/Vehicle	\$31,500	\$25,000	\$34,956	\$24,339	10.97%	-2.64%
Cost per Trip	\$7.00	\$4.62	\$6.31	\$4.79	-9.80%	3.66%

¹ Directory of Rural Public Transportation Providers Funded by FTA's Section 18 Program, Prepared by Community Transportation Association of America, December 1994

² Data collected by the Institute for Economic and Social Measurement for FTA, 1988-99.

"Transportation is really about people."

So it's really not an issue of highways vs. transit. It's really a matter of providing both in a balanced kind of way that gives people choices and that enhances a community, enhances an environment, and improves the quality of life."

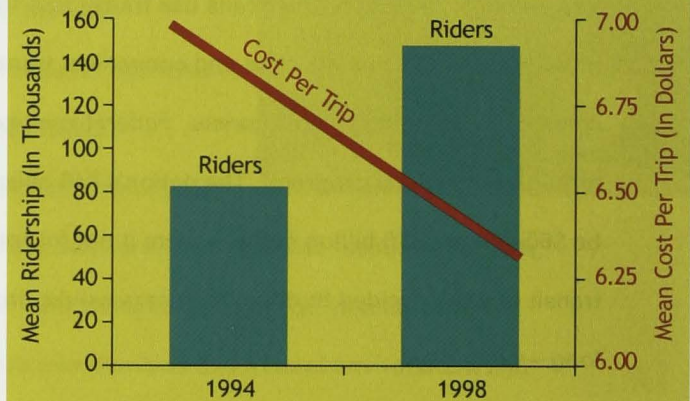
— Secretary Rodney Slater in *The National Journal*,
June 17, 2000

The FTA has provided financial assistance to mass transit agencies since 1961, when President Kennedy initiated a pilot program to make targeted investments in mass transportation. In 1964 this was converted into a permanent capital assistance program, a program that has evolved into today's FTA. The agency has

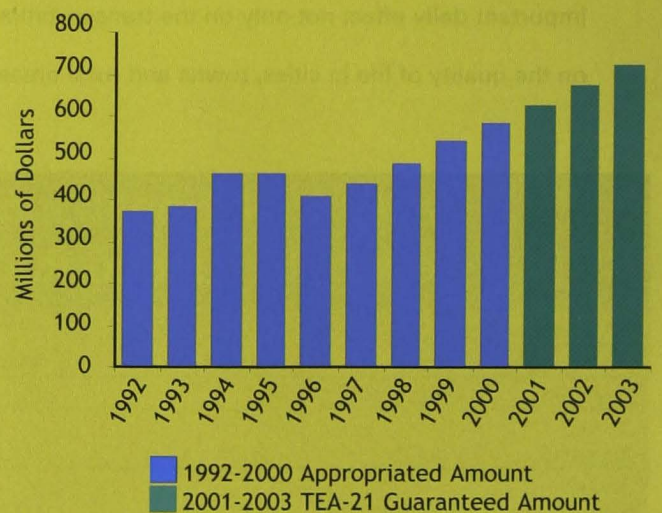
re-focused its efforts in the last eight years, however, and has emerged as an important factor for ensuring the vitality and the livability of communities throughout America.

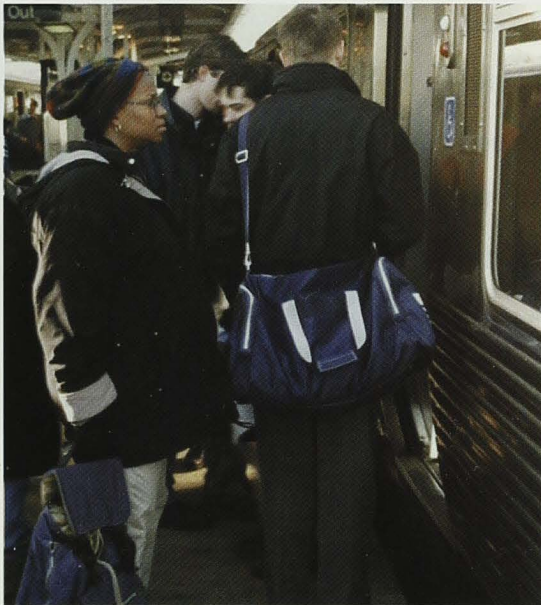
ISTEA, the landmark statute enacted in 1991, was the predecessor to TEA-21.

Rural Ridership and Cost Per Trip, 1994-1998



Federal Transit Funding 1992-2003





ISTEA began a new spirit of cooperation between FTA and its customers. Under ISTEA, FTA became an advocate for an environment that would make mass transportation operate most effectively, serve more people, and improve their quality of life.



Rural public transportation services in the U.S. have grown substantially in recent years. Today there are more rural public transportation systems than ever before; there are more vehicles in operation; there is a very large increase in passenger

trips on these systems; and at the same time, there is a very large increase in the budgets of these systems. On average, cost per trip declined nearly 10 percent, indicating that rural public transportation systems are operating at higher levels of efficiency with a substantial improvement in cost-effectiveness than before.

Economic Benefits of Transit

Less Traffic Congestion

- One full 40-ft. bus equals a line of moving automobiles stretching 6 city blocks.
- One full six-car heavy rail train is equivalent to a line of moving autos stretching 95 city blocks.

P L A N N I N G

WHERE IT ALL GETS STARTED

"I Thought That We'd Been Forgotten."

After a ceremony in Los Angeles in 1999 to dedicate a Livable Communities project, the FTA Administrator spoke with some people who had been in attendance, and the people expressed what the new transit station meant to them. It means *hope*. "I thought that we'd been forgotten," one elderly woman said as her eyes filled with tears.

Since 1993, FTA has taken the lead in encouraging the practice of combining land-use planning with transit planning and working with our transit agency partners to go the extra mile to ensure that new transportation investment will not simply build a rail line or upgrade a bus system, but produce added vitality for the community it serves. Thus, FTA's **Livable Communities Initiative (LCI)** was born.

The concept of livable communities is at the heart of the transit assistance program FTA manages. The initiative promotes enhancements to make transit facilities more "user friendly," such as improving pedestrian flow into and out of transit stations; building child-care centers in subway terminals to make it easier for parents to drop off and pick up their children at the end of the work day; centering retail activity around transit facilities so people can incorporate errands into their commute. An additional outcome of the livable communities initiative which has proven highly beneficial is that non-federally funded livable community and transit oriented development projects have sprung up on their own. Transit operators are truly becoming mobility managers—incorporating customer needs and innovative financing goals into nearly every capital investment under consideration.

A transit station brings not only a building, trees and benches, but *opportunities, ambition and respect*. Now the people in the community can apply for and get to a job across town; now they can take a class at night to improve their skills; now they can visit the doctor or dentist, and they can *move ahead*.

Under The Livable Communities Initiative:

Twenty-four capital transit projects costing **\$52 million leveraged over \$118 million** in local funds.

Over \$1.3 million in local planning efforts have been allocated to 14 of these communities for further public involvement to ensure that the projects best met the needs of the communities. Of the original 24 projects, sixteen Empowerment Zones and Enterprise



Communities have been provided over \$33 million in direct capital or planning assistance.

Among the community service components at the projects are day care, health care, police substations, job training and employment services and transit planning services. Most of the projects have safety and passenger amenity elements that make the transit accessibility and transfer connections user-friendly and provide a bike/pedestrian-friendly environment.

- **In 1995, the Mayor of Los Angeles** selected transit-dependent neighborhoods to participate in the "Los Angeles Neighborhood Initiative" (**LANI**). Twelve neighborhoods received assistance through the Los Angeles County Metropolitan Transportation Authority to develop plans for their area, and FTA supported eight of these projects.

The LANI Board determined that the neighborhoods felt disconnected; one of the solutions would need to provide a way to connect or link neighborhoods. City and FTA funding was used for planning, design, engineering and pedestrian amenities. Trees were planted, light fixtures were painted and beautiful colored banners, designed by local students, were hung, all providing a feeling of connection to the community.

- **In 1996, Corpus Christi Regional Transportation Authority** decided to construct three bus transfer facilities within predominantly minority communities. Close to 43 percent of the households in Corpus Christi are Hispanic. The FTA funded the centers and many of the customer-driven amenities that make the structures part of the community. "Es lo nuestro," "it is ours"—is how the community feels about the transfer stations. Residents were involved in the design and manufacture of the tile for the Staples Street and Port Ayers Stations. The Staples Street Station—the winner of a



Corpus Christi:
"Es lo
Nuestro."
 ("It is ours.")

Presidential Design Award—is located in downtown, across from City Hall, and also serves as an employment center. Residents now have improved access with wider sidewalks, better lighting, colorful landscaping, bus stops and shelters, along with safety enhancements. The beautiful mosaic tile work depicts scenes of Hispanic culture and stands as a testament to the rich cultural heritage and spirit of the community.

- **The Wellston MetroLink Station in St. Louis, Missouri,** is a shining example of what can happen when a community comes together to partner with local and Federal programs. The city had an unemployment rate 2.5 times the regional average; violence in the area was bad and

worsening; and much of the once thriving business district was gone.

Through the LCI grant and local resources, extensive community outreach identified priority projects. Improvements at the station include a Park-N-Ride facility, the installation of a public art project and distinctive new signage.

Street improvements along the main entrance and a new pedestrian pathway that will feature an artist-designed fence are being completed.

A child care facility adjacent to the

station is being planned and the Economic Council of St. Louis County is building on these improvements and aggressively moving forward with the development of the Technology Center.



- **In Columbus, Ohio, the Central Ohio Transit Authority's (COTA) Livable Communities**

Program has two projects that will bring new life and investments to the citizens of the Columbus Urban Empowerment Zone. COTA is developing two transit centers, one located in the new Easton, a planned development that is estimated will provide 43,000 jobs when completed. The other is in the Linden neighborhood and directly serves Empowerment Zone residents. The Linden project, located between residential and manufacturing neighborhoods, was developed in coordination with the Columbus Urban Growth Corporation. This public/private venture includes child care, medical care, job locator and training services, public and private office space and retail, including the first bank branch ever located in this community. COTA is improving pedestrian movements and safety features that provide better access to this Transit Center. In addition, a major element of the Easton Transit Center is a park and ride facility that will allow access to the Easton development internal circulator system.

Economic Benefits of Transit

During the 1990's,

- transit returned \$23 billion annually to the national economy in affordable mobility;
- \$9.4 billion per year in annual reduced congestion delays for rush-hour passengers and motorists was realized;
- \$10 billion was saved per year in reduced auto ownership costs for residents of location efficient neighborhoods;
- Up to \$12 billion per year in reduced auto emissions was saved;
- \$12 billion a year in local human service agency budgets was saved;
- and there was a 2 percent boost per year in property tax receipts from commercial real estate locating near transit.



Location Efficient Mortgages (LEM) are an embodiment of the principles of the Livable Communities Initiative. In October 1997, the Federal National Mortgage Association, better known as Fannie Mae, the nation's leading mortgage company, agreed to underwrite an experimental home loan program to account for auto cost savings households are able to achieve in transit-intensive neighborhoods. The LEM was born and developed with funds and staff support from the FTA. When a home is located in a neighborhood with quality transit services, the homebuyer is able to qualify for a higher mortgage, owing to savings in auto ownership costs. LEM programs are underway in Chicago, San Francisco, Los Angeles, and Seattle.

- **Americans living in** transit-intensive metropolitan areas save \$20 billion per year. People living in walkable transit communities drive fewer miles and thus have lower transportation expenses.
- **Almost half of the nation's Fortune 500 companies**, representing over \$2 trillion in annual revenue, are headquartered in America's transit-intensive metropolitan areas.
- **The savings associated with locating in walkable neighborhoods** increase the borrowing power of businesses and households. The adoption of LEMs by the home loan industry at large could generate \$300 billion in new loans over a seven-year period.

N E W S T A R T S**BUILDING FOR TODAY AND TOMORROW****In Baltimore, Maryland** along the Central Corridor, the Full Funding Grant Agreement to fund the **Light Rail Double Tracking project**

will enable trains to arrive at stations more frequently, increasing and improving service. A total of 160,000 employees and 44,000 residents are located within one-half mile of the ten central Baltimore City stations. The Central Corridor Line is 29 miles long and serves Baltimore City and Baltimore and Anne Arundel Counties, with extensions to Penn Station and the Baltimore-Washington International Airport.

FTA has developed an objective, structured evaluation

process for its New Starts funding recommendations to Congress. The criteria used for these evaluations recognize factors critical to the success of transit projects, such as their contributions to improving air quality and travel times, local land use conditions supportive of transit, the financial viability of the project and the transit system as a whole, and the project's cost-effectiveness. This evaluation is undertaken several times during project development, ensuring that only the most competitive projects proceed. This evaluation process has been recognized for its rigor by Federal Government auditing agencies.

Since January 1993, FTA has provided **over \$6.17 billion** in New Starts funding. New Starts funds are intended to be available for the engineering and construction of major fixed guideway capital transit investments such as light

The Hiawatha Corridor Light Rail Project in Minneapolis will serve office

parks, low and lower middle-income residential neighborhoods, downtown Minneapolis business areas, outdoor recreation areas, a Veterans Administration Hospital, shopping and an indoor sports stadium. Extending from downtown Minneapolis to the Minneapolis-St. Paul Airport, and farther south to the Mall of America in Bloomington, residents or tourists can board in downtown, take the light rail to the airport, then board a plane to the Netherlands or Singapore. Residents will be able to access a number of job centers—the airport, a large Veterans Administration Hospital, the Mall of America, the headquarters of Northwest Airlines, and a Federal employment complex. They can attend sports or entertainment events at the Humphrey Metrodome or themselves play sports at the Minnehaha City Park or Fort Snelling Park.

Full Funding Grant Agreements Since 1992

Fiscal Year FFGA Issued	Project	Total Project Cost (in millions)	Section 5309 Amount (in millions)	Type	Revenue Operation Date
2000	Dallas - North Central LRT Extension	\$517	\$333	LRT	Dec-03
2000	Fort Lauderdale - Tri-Rail Commuter Rail Upgrade	\$327	\$111	CR	Mar-05
2000	San Diego - Mission Valley East LRT Extension	\$431	\$330	LRT	Dec-05
2000	Newark Elizabeth - Rail Link (MOS-1)	\$208	\$142	LRT	Jun-05
2000	Portland - Interstate MAX LRT	\$1,674	\$258	LRT	Jun-07
2000	Salt Lake City -	\$119	\$85	LRT	Nov-02
1997	CBD to University LRT Northern New Jersey- Hudson Bergen LRT System (MOS-1)	\$992	\$605	LRT	Apr-00/ May-02
1997	Sacramento, CA - South LRT Extension	\$222	\$111	LRT	Sep-03
1997	San Francisco - BART Extension to SFO	\$1,483	\$750	HR	Jul-02
1997	St. Louis, MO-IL; St. Clair County, IL Metro Link LRT Extension	\$339	\$244	LRT	Sep-01
1996	Denver - Southwest LRT Extension	\$176	\$120	LRT	Jul-00
1996	San Jose - Tasman West LRT Extension	\$325	\$183	LRT	Dec-99
1996	San Juan - Tren Urbano LRT	\$1,654	\$307	LRT	Jul-01
1995	Baltimore - LRT Extensions	\$106	\$85	LRT	Sep-97
1995	Baltimore - Marc system improvements	\$132	\$105	CR	Mar-01
1995	Boston - South Piers - MOS-2	\$413	\$331	BUS	Dec-02
1995	Houston - Regional Bus Plan	\$625	\$500	BUS	Dec-02
1995	New Jersey - Urban Core/ Secaucus Transfer	\$444	\$444	HR	Jun-02
1995	Pittsburgh - Airport Busway (Phase 1)	\$327	\$121	BUS	Dec-01
1995	Salt Lake City- South LRT	\$313	\$237	LRT	Dec-99
1994	Atlanta - North Springs Extension	\$463	\$371	HR	Dec-00
1994	Dallas - South Oak Cliff LRT	\$281	\$160	LRT	Jun-96
1994	New York City- 63rd St. - Queens Blvd. Connector	\$645	\$306	HR	Aug-01
1994	Washington, D.C./MD- completion of 103-mile Metro System	\$2,065	\$1,290	*	HR **
1994	Jacksonville - Automated Skyway Express Extension	\$109	\$44	people mover	Dec-97
1993	Los Angeles - MOS-3	\$2,781	\$1,416	HR	Jun-00***
1993	San Francisco - Colma Bart Extension	\$170	\$127	HR	Feb-96
1992	Portland - Westside [Hillsboro extension added in 1994]	\$964	\$630	LRT	Sep-98
Totals		\$17,341	\$9,115		

* Funded under separate authorization and appropriations

** Franconia-Springfield Extension - Jun 97, Glenmont Extension-Jul 98, Mid City Segment-Sep 99 and Branch Avenue Extension - Mar 01*

*** North Hollywood Red Line

The 19-mile **Denver Southeast Corridor Light Rail Transit Line**

is projected to carry 38,100 daily passengers by the year 2020. Opening on July 14, 2000, the line has been exceeding opening year expectations by 50 percent.

and heavy rail systems, commuter rail lines, and busways.

A total of **41 Full Funding Grant Agreements**—the commitment of the Federal Government to provide a maximum Federal contribution to transit projects—have been signed or recommended in the President's budget since January 1993. As Secretary Slater has said "the last time this many new rail transit systems were under construction in the United States, Woodrow Wilson was in the White House!"

This growth in mass transit investment will allow communities to provide mobility for their residents. It will be evidenced in **over 400 miles** of new rail and busway service and **330 stations in 26 metropolitan** areas across the United States. These improvements are expected to **serve over 240 million**

As part of the **New Jersey Urban Core Project**, the funding in the FFGA for the **Hudson-Bergen Waterfront Light Rail Transit System** will help serve an average of 34,900 weekday riders by the year 2010.

annual riders. Dallas, St. Louis, and Salt Lake City have already exceeded ridership estimates since beginning service in the last few years.

Proposed FFGAs Through 2001

Project	Description	Type
Northern NJ-Hudson Bergen LRT-MOS-2	Second Phase of Light Rail Project	LRT
Denver-Southeast Corridor LRT	LRT Extension	LRT
Seattle-Link LRT-MOS-1	First Phase of Light Rail Project	LRT
Chicago - Douglas Branch Reconstruction	Reconstruction of Heavy Rail Blue Line	HR
Pittsburgh - Stage II LRT Reconstruction	Reconstruction and Double Tracking of Rail System	LRT
Memphis - Medical Center Extension	Light Rail Extension	LRT
Minneapolis-Hiawatha Corridor LRT	Construction of Light Rail Project	LRT
Baltimore - Central LRT Double Tracking	Double Tracking	LRT
"Washington,DC/MD-Largo Extension"	Heavy Rail Extension	HR
Chicago-Metra Southwest Corridor Commuter Rail	Commuter Rail Extension	CR

M O B I L I T Y

SHAPING AMERICA'S FUTURE WITH ACCESSIBILITY, EFFICIENCY, AND FLEXIBILITY OF CHOICES

While mass transportation has historically been considered mobility since the 1950's for those who cannot afford a car,

that perception is changing. A *Washington Post* real estate story headlining "Amenities a Driving Force in Empty-Nesters' House-Hunting,"— and these are affluent 'nesters—and among their interests are "...walking to finer restaurants, going to the theater, ... taking public transportation" shows mass



transportation has come a long way!

When people want to travel to the theater in center city, when sports fans want to get to the football or baseball stadium and all arterial roads are clogged, when tourists visited Atlanta for the Olympics in the summer of 1996, **transit makes sense.** The Metropolitan Atlanta Rapid Transit Authority carried **over 25 million people in 17 days.**



A record number of passengers used subways, buses, light rail and commuter trains in 1999: more than **9 billion riders** in one year—for the first time since the beginning of the Federal mass transit assistance program under President Kennedy! Increasing awareness of the benefits of transit, along with the cumulative effect of FTA's new starts, bus and formula grants programs,



have greatly enhanced transit as a transportation choice.

Since 1993, **33,079 buses, 11,894 vans for the elderly and persons with disabilities, and 1,582 rail vehicles have been purchased** with the help of FTA funding. Passage of TEA-21 fully incorporates public mass transportation's key role as a strategic

investment essential to strengthening America for the challenges of the 21st Century.



A new and innovative program provides monthly bus passes to Medicaid patients. Medicaid patients may use the passes for doctor's visits and to meet other transportation needs. This program is far less costly than other medical transportation services. For example, in the Miami metropolitan area, Medicaid costs

have been reduced over \$300,000 per month, or almost \$4 million annually. Projected around the country, the benefits of this program will be enormous.

Economic Benefits of Transit

Affordable Mobility

60 percent of transit riders cite low-cost, regular access to as many destinations as possible, as a reason for using transit. These are people who do not, or cannot, operate a motor vehicle because of personal preference, low income, disability, youth or old age.

Congestion Management

57% percent of all transit riders have as their objective reduced travel time and efficient, cost-effective travel.

Supports Transit Intensive Neighborhoods

Fosters community livability and "smart growth" land use development in densely developed neighborhoods. 54% of riders surveyed cited community livability as their reason for using transit.

I N N O V A T I V E F I N A N C I N G I N I T I A T I V E

The Innovative Financing Initiative is geared toward connecting capital investment with a variety of methods for managing capital flows or attracting new funding for transit systems nationwide. Since its inception in 1994, FTA has reviewed **45 innovative financing transactions, valued at nearly \$5.7 billion.** These transactions provide **\$407.2 million in present value benefit to transit operators**—enough to buy 200 light rail cars or 1,700 new transit buses.

The newer innovative financing techniques rely on guaranteed funding levels in TEA-21, use of private capital markets and closer links between a transit operator's ongoing capital flows and its ever-growing capital needs. TEA-21 allowed **joint development**—the program whereby the public and private sectors can work cooperatively to develop projects which incorporate transit-supportive uses including space for day care, senior care, public health, safety and security services, and in which the transit operator is expected to generate a reasonable return on the space that is made available for these services—to be accelerated, leading to faster increases in ridership and more certain revenues from facilities near the transit facility. **Grant anticipation debt** can be used to minimize project delays, or Certificates of Participation and pooled procurements can be used to reduce acquisition costs. With advanced planning, multiple techniques such as **turnkey, delayed local match and joint development** can be used.

The Transportation Infrastructure Financing and Innovation Act (**TIFIA**) was authorized in TEA-21. The TIFIA program allows FTA to make loans, loan guarantees, and issue lines of credit, for up to one-third of the cost of large, nationally significant transit capital projects.

- A \$600 million loan guarantee with the Washington Metropolitan Area Transit Authority (WMATA) will allow the grantee to accelerate its Infrastructure Renewal Program by several years, and will save over \$50 million in rehabilitation costs.



- A \$300 million loan guarantee was negotiated with the Puerto Rico Highway and Transportation Authority to accelerate completion of the Tren Urbano rapid rail project.

This project had been delayed by severe weather and was facing rising costs. The loan will allow completion of the Tren Urbano system, which is projected to carry over 100,000 passengers per day in its first year of operation.

Please see the FTA publication, **"Financing Techniques for Public Transit," February 2000**, for more information on this initiative.

Economic Benefits of Transit

A total of 9 billion trips, representing 43 billion passenger miles of transit service, were provided in 1999, and Federal funding for transit is over \$6 billion in 2000.

- Over 10 million people use transit each weekday.
- 13 percent of U.S. Households do not own a car.
- In 1997, 3.8 billion miles and 255 million hours of service were operated in transit.
- The average new 40-foot transit bus costs \$277,000; rail cars cost from \$1 million to \$2.5 million each.
- It takes 350,000 employees to operate, maintain and administer transit service.
- Transit vehicles used 768 million gallons of fossil fuels and 5 billion kilowatt hours of electricity in 1997: Less than 1% of all the energy consumed in the country.
- Commuting on transit costs individuals between \$200 to over \$2,000 a year. Commuting in a small car costs \$4,660, and in a large car up to nearly \$10,000, depending on mileage.

S A F E T Y

OUR HIGHEST OBJECTIVE

Public transit has long provided one of the safest forms of travel, and FTA continues to encourage improvement on that record. During the six-year period ending in 1998, the **fatality rate** has declined by **7.5 percent**, even better than our goal. During that same period, **transit injuries** were reduced **7.9 percent** and incidents such as vehicle collisions were down more than **19 percent**.

The FTA Bus Testing Program seeks to ensure that deficiencies in new bus models are corrected before entering revenue service, saving transit agencies and taxpayers millions of dollars over the life of each bus model. The program includes a comprehensive range of tests including maintainability, reliability, safety, performance, structural integrity, fuel economy and noise. **The Bus Testing Program has successfully identified safety-related problems that could have resulted in severe injury or death, including fuel tank leaks, fire detection/suppression system failures and high current electrical short circuits.** A wide range of technologies undergo testing including diesel, alternative fuels (LNG, CNG, methanol and propane), battery-electric propulsion, hybrid-electric propulsion and composite materials. **Over 4,000 malfunctions have been identified ranging from minor problems to serious design deficiencies** that could have resulted in costly fleet failures. A state-of-the-art test facility in Altoona, PA, **has tested 150 new bus models since 1992.** These activities demonstrate FTA's concern for increasing safety and reliability of transit vehicles, while also safeguarding the Federal investment.



State Safety Oversight Program

State safety oversight of rail fixed guideway, (other than commuter rail, which is under the jurisdiction of the Federal Railroad Administration) is the responsibility of FTA. State safety oversight agencies, designated by the governor of the state, are charged with overseeing transit rail systems, which are required to comply with both safety and security requirements.

The FTA web site (<http://transit-safety.volpe.dot.gov>) provides critical information by posting safety and security bulletins and distributes technical assistance materials. Since the program's inception, FTA has collected safety information regarding **34 rail transit systems** from the states' 3-year reviews and transit agencies' internal safety audits. These two oversight functions have identified **942** corrective actions needed to prevent accidents. The information is disseminated to the transit industry in a "best practices" context so that operators across the country may benefit from the findings.

Transit Safety and Security Training Program

This program is conducted for FTA by the Transportation Safety Institute (TSI) in Oklahoma City. In FY 2000, TSI gave **104 offerings of 23 different courses**. Since 1993, **38,167** transit employees were trained at TSI in courses designed to strengthen system safety programs at the local level.

Drug and Alcohol Program

FTA instituted a comprehensive drug and alcohol audit program in 1997. To date, FTA has conducted audits of **79 major transit agencies' compliance** with the drug and alcohol regulations.

Since the testing inception, FTA has seen a decrease in the overall transit industry workforce's positive drug and alcohol testing rate. Industrywide, the **positive drug testing** rate in **1997 was 1.21 percent, in 1998 1.07 percent and in 1999 .61 percent**. For 1997 through 1999, the **positive alcohol testing** rate has continued to stay at a very low industrywide rate of **.14 percent**.

Economic Benefits of Transit

Transit is one of the Safest Modes of Travel.

- Per 100 million passenger miles, the death rate is **0.94 for autos, compared with 0.02 for transit buses.**

C I V I L R I G H T S

The Americans with Disabilities Act

FTA provides information and technical assistance to transit providers regarding the requirements of the Americans with Disabilities Act (ADA) and the U.S. Department of Transportation ADA regulations. Since 1996, the agency investigates and closes at least **200**

ADA complaints per year. FTA initiated a **toll-free phone number** and an **e-mail** address for the general public and transit providers to ensure the availability of information on the ADA.

The FTA toll-free ADA assistance line is: 1-888-446-4511, and the **e-mail address is: ada.assistance@fta.dot.gov.** ADA information is disseminated to disability groups, complainants, and



transit operators. Outreach is also continued through the issuance of **FTA ADA Newsletters** and the continued dissemination of the **ADA and Equal Employment Opportunity brochures**. In addition, FTA continues to conduct ADA compliance assessments on ADA Complementary Paratransit and Fixed Route bus services. These assessments not only ensure compliance with the DOT ADA regulation, they also provide **valuable technical assistance to transit properties**.

ADA Key Station Compliance

Currently, 666 rail stations are either accessible or are under plans for full compliance as a result of stepped-up efforts by FTA to document accessibility of key transit stations. Assessments will continue, as another **172 stations** at the 33 different transit properties with rail transit are visited through the year 2001.

Title VI/Environmental Justice

In 1994, the Federal Government implemented an initiative "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."

Environmental Justice (EJ) can be defined as the fair treatment of all people regardless of race, color, ethnicity or income with respect to the benefits and burdens of environmentally-related programs, policies and activities. The Departmental mission is directed at ensuring early and ongoing involvement of low-income and minority groups in transportation decisionmaking.

- **An Environmental Justice Summit** was sponsored by FTA and the Federal Highway Administration in July 2000. The summit was designed as a roundtable discussion for Metropolitan Planning Organizations, States, the transit industry, community, civil rights and environmental advocates to discuss EJ and Title VI. The Summit reached its goal of increasing communication between the traditional recipients of FTA and FHWA funding and the community. The message was clear: **DOT expects local communities to have a meaningful and substantive involvement in all federally approved transportation projects.**
- **U.S. DOT, The Georgia Department of Transportation, The Metropolitan Atlanta Rapid Transit Authority, the Georgia Regional Transportation Agency, and a coalition of EJ and community groups** are undertaking an assessment of EJ issues relating to transportation in the Atlanta region as a **pilot analysis case**. As the result of a challenge to the Atlanta transportation decisionmaking process, a work plan has been developed to review procedural aspects of the planning process, such as public participation. It also includes an assessment of the distribution of burdens and benefits of transportation facilities. The procedural and analytic lessons learned will be valuable to others involved in EJ.



Project Action

Easter Seals Project ACTION (Accessible Community Transportation in our Nation) is a congressionally-created national technical assistance program authorized under ISTEA. The foundational work of Project ACTION is in promoting cooperation between the disability community and transportation industry. This work enables improved access to transportation for people with disabilities and the provision of accurate and practical information to help



transportation operators implement the ADA. Since 1991, **more than 100 innovative local demonstration projects and research initiatives** in communities throughout the nation have been funded through Project ACTION. In addition, **30 technical assistance projects** have been funded to **create concrete solutions** to the pressing **ADA**

accessibility issues faced by public transit operators.

Easter Seals Project ACTION provides training, resources and technical assistance to thousands of disability organizations, consumers with disabilities and local transportation operators. One example of these resources includes the **National Travelers' Database**, which is a comprehensive database of accessible transit services in the United States that is friendly both to the user and the travel industry, and accessible through the world wide web. Project Action has recently conducted targeted training for the **Motorcoach Industry on Customer Service for Passengers with Disabilities**. In addition, Project Action implements a **consumer education program** called "**ADA. . . The Bus Stops**" to help individuals with disabilities recognize their community transportation options and related resources. Project ACTION provides a variety of resources and comprehensive customer-friendly technical assistance both through their website at www.projectaction.org and through their **Information Line at 1-800-659-6428**.

E N V I R O N M E N T

Established in the late 1980s, FTA's Clean Air Program was implemented to assist transit agencies with the large-scale procurement of alternative fuel buses including ethanol, methanol, compressed natural gas (CNG), propane and liquefied natural gas (LNG). Over the last eight years, the program fulfilled its critical mission to provide guidance to the transit industry on the design of fueling and maintenance facilities; to develop a series of safety analyses covering the most critical topics for alternative fuels including alcohol, CNG, LNG, propane and hydrogen; and to provide risk analyses for the various fuel types. FTA worked in cooperation with a wide variety of industry stakeholders to develop this guidance, including alternative fuel industry suppliers, expert consultants, transit operators, fuel advocacy groups and the National Fire Protection Association. The resulting documentation is widely accepted by transit operators, consultants and other entities active in the design and use of alternative fuel vehicles.

Commuter Choice

The Commuter Choice Initiative furthers FTA's environmental goals of reducing congestion, improving air quality and conserving energy by providing incentives to employees to commute to work by means other than driving alone.

It promotes a greater range of employer-provided commuting benefits and allows employers to tailor transportation benefits to their individual employee's needs. It also assists employers in attracting and retaining qualified workers in a tight labor market.

TEA-21 changed the Tax Code to increase the amount of transit benefits treated as tax free to \$65 per month and to permit employees to choose tax-free transit in lieu of taxable pay. Considered "qualified transportation fringe benefits" under the Internal Revenue Code, employers may provide employees

Economic Benefits of Transit

Energy Efficiency

- Buses emit only 20 percent as much carbon monoxide as single occupant automobiles per passenger mile.
- Rail transit emits almost no hydrocarbons and carbon monoxide.



with transit vouchers or passes, vanpool vouchers or passes and qualified parking benefits.

Transit, vanpool and parking benefits are free of any Federal income or payroll taxes up to limits set by the Internal Revenue Service. Employers may use corporate funds or permit employees to exchange pre-taxed salary to pay for any of these benefits. All benefit levels are indexed to inflation and subject to change on an annual basis. FTA has published the **Commuter Choice Tool Kit**, a comprehensive guide to implementing Commuter Choice at the worksite. Presidential Executive Order 13150 requires that all Federal departments and agencies offer transit and vanpool benefits to all employees, nationwide, by October 1, 2000. Several hundred thousand employees across the nation are recipients of these benefits. Most major transit operators have programs that support Commuter Choice and make it easy and convenient for employers to purchase the passes and to provide them to their employees.

- **All employees of American Express in Twin Cities, MN,** receive a company-paid annual Metropass. Of the 6,000 employees, 2,800 are current bus riders.
- **The U.S. Navy** recently spent \$100,000 to purchase bus passes for sailors and civilian employees assigned to bases in Coronado, CA. They will be used for access to North Island Naval Air Station and the Naval Amphibious Base.
- **At Mellon Bank,** 22,000 workers nationwide have been offered pretax transit benefits beginning in July 1999. Most of their employees are located in Pittsburgh, Boston, New York City, and Los Angeles.
- **The State of Georgia** reduced the cost 1,300 State employees pay for monthly Metropolitan Atlanta Rapid Transit Authority (MARTA) transit cards to \$30, a reduction of \$8.25
- **Westchester County, NY,** offers its 6,000 county employees TransitChek on a pre-tax basis.
- **Georgia-Pacific** contributes \$30 toward the monthly fare for travel on MARTA and other area transit providers.

J O B A C C E S S A N D R E V E R S E C O M M U T E

TRANSIT LEADS THE WAY TO WORK

To help achieve the national priority of getting people “from welfare to work,” — the “to” being transportation to the job or to training — in May 1999, FTA established a grant program and selected **136 applicants to provide over 190 Job Access and Reverse Commute projects in 41 states and the District of Columbia.**

Job Access and Reverse Commute projects range from expanding current routes at new hours to accommodate those on shift work; to starting new routes to areas where entry-level jobs predominate, such as in the service industry at hospitals,



hotels or fast-food restaurants, or to factories or distribution centers; to purchasing computers so that social workers or employment counselors can teach their clients how to use transit to get to work or training. Because there is a geographic mismatch between where low-income people, especially low-income minorities, live and where most jobs are, Job Access and Reverse

Commute projects help solve this problem. Most regional public transit systems developed in the 1960's and '70's were intended to connect predominantly upwardly mobile suburban bedroom communities to the nation's central cities, where most people worked. In the last 20 years, these bedroom communities have become America's commercial and board room centers. The suburbs now have twice as many new jobs as central cities and nearly 60 percent of all metropolitan jobs. And while the middle income earners of all groups have moved to the suburbs, the poor are mostly confined in the cities with limited opportunities for well-paying entry and mid-level jobs. Unfortunately, most public transit systems have not had the resources to keep pace with these changes. As a result, public transit systems frequently fail to connect the urban poor living in inner city neighborhoods with suburban jobs.



The Job Access and Reverse Commute Program is a catalytic program intended to draw attention and additional resources to meet the transportation needs of welfare recipients and low-income persons and to form the partnerships necessary to successfully address these issues. Collaborative partnerships are at the heart of this program and the major key to solving these difficult transportation challenges.

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- **In Iowa**, a transit agency used Job Access and Reverse Commute funds to expand evening services by two hours each weekday. Service began on January 4, 2000, with **a goal of 30 additional passengers per hour**. The goal has been vastly exceeded by getting **90-130 riders** for each additional hour of service. These riders have said that the service is allowing them to work late, and for riders with disabilities, offers them an opportunity to move through the community after work to grocery shop.
 - **The Massachusetts Bay Transportation Authority (MBTA)** began Job Access and Reverse Commute services in September 1999. They now serve **111 new stops** reaching previously unserved employers and **410 stops** at times not previously served. An estimated **285 stops** are within 1/4 mile of residences of welfare recipients or low-income persons.
 - **The Chattanooga Area Regional Transportation Authority (CARTA)** began a demand-response service that transports children to child care facilities, as well as expanded transit service hours on four routes and provided additional weekend service. CARTA is reaching **62 new child care centers** that provide service to **1,864 children**, and is providing access to over **15,000 entry-level jobs** not previously reached.

CityLink Transit in

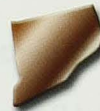
Abilene, Texas began providing evening transportation service last November as a result of a Job Access and Reverse Commute grant award. **Laura**

Berman*,

a single woman with no dependents, was able to expand her part-time hours at her food service job. Laura was unable to work a full-time schedule previously because Abilene public transportation only ran until 6:15 p.m. Now, as a result of the Job Access CityLink services, Laura can work almost full time.

• **In Bridgeport, CT, the People to Jobs**

Transportation Task Force (The Workplace, Inc.) received a \$928,000 Job Access and Reverse Commute grant in FY 1999. The project has been so successful, that by August 2000, their new job access transit service will have carried **one million riders!**



• **Although the Fort Worth Transportation Authority (FWTA) had**

worked on a number of initiatives to help people move from welfare to work, the Job Access and Reverse Commute program proved the critical catalyst for bringing together all the needed partners. Through their Job Access and Reverse Commute grant, the FWTA has built relationships that ensure that daycare, job coaches and mentors, training and job readiness workshops are available once the first barrier of transportation can be overcome. The



Susan Brown*,

a mother of three children, benefits from **CityLink Job Access** services in Abilene, Texas. Susan has a disability and uses a wheelchair. In December of 1999 she began using the new transit service to take night courses at the American Commercial College. She currently holds an Associates Degree and is pursuing a Medical Technician Certification at the college. This Job Access and Reverse Commute service also allows Susan to get to evening dialysis treatments at the Abilene Area Dialysis Center.

FWTA has partnered with local agencies to create a customized vanpool program for people who can't use the regular bus service to get to work.

* The names in these case studies have been changed to preserve participants' privacy.

Marge Browski*

of West Virginia was taking computer classes but had dropped out for lack of transportation. Using the **CHANGE, Inc.**, Job Access service, Marge was able to go back to class and, within a month, found employment in a neighboring county. She now uses the transportation service provided by CHANGE, Inc., to get to her new job.

Thirty-five people, most of whom are women with more than one child under the age of five, are participating in this program.

- **Northwest Ohio CommuterLink** began a van service with Job Access and Reverse Commute funds in coordination with placement agencies in Toledo. The service reaches **200** employers and schools and has served **600** adults and **360** children.

The Job Access and Reverse Commute funds have allowed Mary Smith* to get her children to daycare and herself to a job for the first time in 12 years.

CommuterLink receives regular "thank you" notes from people saying they could never have taken a job if they didn't have the service.



- **The Red Rose Transit Authority in Lancaster, PA**, received \$100,000 from FTA Job Access and Reverse Commute funds to purchase two vans for vanpool services and to expand existing transit. They've reached **85** new employers with **120** new jobs and **70** new stops within 1/4 mile of welfare recipients' or low-income residences.



- **Last October, the Worcester Regional Transit Authority in**

Massachusetts began **12** new services with connections to **29** major employers, **24** daycare facilities, **26** training facilities and **two GED** test centers. In three months, the service attracted **46,000 riders!**

- **Monongalia County Urban Mass Transit Authority** in Morgantown, West Virginia, used its JARC grant to add **three** new routes to its rural services beginning February 2000.



- **In July 1999, Rides Mass Transit, a rural Illinois transit provider,** was able to expand services during late hours and on weekends as a result of FTA Job Access and Reverse Commute and matching human services funds. Within the first three months, the service took **103** riders to jobs, **79** of whom are now employed, at an average wage of \$7 an hour for 32 hours a week, amounting to an annual payroll of \$1 million as a result of the Job Access and Reverse Commute grant.



The Federal investment in mass transportation helps People.

Whether it be a rural West Virginia area having three new routes, or the MBTA in Boston serving 111 new stops and 410 stops at times not previously served, our Federal investment in public transportation **is aimed at helping people.**



RESEARCH, DEMONSTRATION, AND INNOVATION

TRANSIT LOOKS TO THE FUTURE

Economic Benefits of Transit

Fuel efficiency of transit

compared to the average
commuter auto:

- 1 Bus with 7 passengers =
1 Auto
- 1 Full Bus = 6 Autos
- 1 Full Rail Car = 15 Autos

Gasoline Savings Annually

- 200 Gallons saved for each
person switching from
driving alone.
- \$1 invested in transit results
in a \$3 to \$3.50 increase in
business revenues
nationwide.

When it comes to technological progress in today's society the **future** is **now**.

FTA plays a critical role in identifying, developing and deploying new technology into the transit marketplace. FTA supports the efforts of developers and operators that, without Federal support, may not have the opportunity to move forward. The agency maintains a strong commitment to working with industry partners in support of technology that makes the transit journey safer, more reliable, cost-efficient and environmentally friendly. Technology goes hand-in-hand with new and expanded services—

because it's not just about providing more buses and trains. FTA strives to ensure that the public investment in advanced transit systems and services will provide the best possible value to its customers—the traveling public. In 1997, FTA, together with its industry partners, developed the first ever Research and Technology 5-Year Plan. A concentrated focus will ensure heightened results over the next five years.





Advanced Bus Technology

Buses provide the predominant form of transit in the United States.

With the vast majority of the transit-riding public utilizing bus service across the country, it is clear that reliable, safe and efficient

service is critical. FTA has initiated several research projects in the last eight years that have contributed to significant advancements in bus technology and services. Advancements in **alternative fuels, Intelligent Transportation Systems and lightweight composite materials** and other innovations have worked their way from research to deployment and mainstream application.

Of particular significance is the **Advanced Technology Transit Bus (ATTB) development program** which demonstrates the viability of various advanced technologies for transit buses. The ATTB development program began in 1992 with the Los Angeles County Metropolitan Transportation Authority and the Metropolitan Transit Authority of Harris County in Houston, Texas, and was successfully completed in 1999. Six lightweight, low-floor, low-emission full-size prototype transit buses have been produced, tested and demonstrated. The program has successfully spurred the transit industry to pursue advanced vehicle and subsystem technologies for buses, such as electric drive systems.

Some of the technologies demonstrated under the program have been mainstreamed into current commercial transit buses, such as **composite bus structure**, which reduces the weight of transit buses by as much as 25 percent. The reduction of the weight of the buses **increases fuel efficiency, vehicle durability and reduces emissions**, resulting in lower operating and maintenance costs, as well as fewer air pollutants.

Another important area of FTA's bus technology program is the **Demonstration of Universal Electric Transportation Subsystems**



(DUETS) program. The DUETS program, a joint industry/government research effort, brought together a consortia of companies involved in the design and development of advanced vehicle subsystems to design and adapt existing military and commercial technologies to the

requirements of a hybrid electric system for a transit bus.

Hybrid electric drive systems can offer

significantly lower emissions and increased efficiency over current technology buses, without the costly fueling infrastructure required by other clean fuels.

In the last three years, interest in **Bus Rapid Transit (BRT)** has burgeoned throughout the transit industry. Fueled in large part by FTA's BRT Demonstration Program, which provides some \$2 million to transit authorities throughout the country, authorities are now considering BRT as an alternative to more costly rail systems. BRT is particularly attractive to cities that find investments in rail transit not possible in the short-term, but can make use of existing infrastructure to improve bus service. FTA has helped transit authorities learn from successful international experiences with BRT through active cooperation with foreign governments and transit authorities. Currently, **17 cities** participate in FTA's BRT Consortium. The consortium serves as a forum for technology

Economic Benefits of Transit

Creation of Jobs

- In addition to over 300,000 people directly employed by transit, 2,400 direct and 5,800 total jobs are created by each \$100 million of capital investment.
- Operating funds of \$100 million generate 3,100 direct and 7,300 total jobs.

and information exchange and is **helping cities** take the important step from system design to funding and implementation. By combining **dedicated busways** with advanced technology (**automated signal priority at intersections, vehicle location and monitoring systems to keep buses on schedule and new vehicles that provide better accessibility and aesthetics**), BRT is poised to bring bus service into the new century.

Intelligent Transportation Systems (ITS)

Electronic Fare Payment: In 1993, the concept of integrated transportation payment

systems, including smartcards for transit fare payment, was considered by many to be

technically unlikely and of uncertain value. After eight years of strong support by FTA's ITS program, contactless farecards are now considered the industry ideal, and integrated payment systems are being developed around the country.

Through the 1990s, FTA supported research and testing through a number of projects, including the Go-Card operational test at the Washington Metropolitan Transit

Authority, The SmarTraveler Card Test in Southern California, the Ventura County Passport card implementation, research support for the San Francisco Bay Area MTC, leading to the current fare integration project, and technical support provided to King County Metro (Seattle, Washington), leading to their current implementation. In addition, FTA has developed draft guidelines for multi-application transit fare systems and has been active in industry groups working to develop integrated transportation payment systems.



Transit Standards Development for Advanced Communications and

Electronics: In the past ten years, advances in communications and electronics have made it feasible to use a variety of advanced technologies to improve bus and bus fleet performance.

But investment in advanced systems is worthwhile only if they can be interconnected, sharing the same electrical and communications hookups and pathways. FTA has invested significantly in efforts to develop standards so manufacturers can develop these affordable, efficient, interoperable systems. In part, as a result of FTA's efforts in standards development, the use of advanced technology by transit fleets has increased significantly. FTA's efforts in this area include the development of the SAE J1708 Vehicle Network Standard, the Transit Communications Interface Profiles project, and the creation of the Transit Standards Consortium.

Implementation Methods (Design Build and International MTP)

Design Build: From Concept to Industry

Acceptance. The FTA Turnkey Demonstration Program was mandated by ISTEA to explore project delivery methods that foster advanced technologies and decrease the time and cost of implementing new transit systems. FTA has played a pivotal role in moving Design Build from concept to reality.



The turnkey method is an innovative project delivery method that allows a public entity to contract with a single private entity to design and build a complete and operational product, and

in some cases, operate as well. FTA was asked to conduct at least two demonstration projects and eventually selected five projects, including the Baltimore Phase II Central Light Rail Transit Line, Los Angeles Union Station Gateway, San Francisco Bay Area Rapid Transit District Airport Extension, New Jersey Hudson-Bergen Light Rail Extension and the San Juan Puerto Rico Tren Urbano project.



The **benefits of turnkey** are **to expedite project implementation, control cost**

variances and introduce innovations. In turnkey delivery, project responsibilities are allocated between the owner and contractors in a manner that most effectively manages relevant risk. Turnkey projects also produce time advantages from combining final design and construction. Combining these two steps allows for an expedited procurement process, a smaller number of contracts to manage and faster project implementation.

The **successes or benefits** that have been achieved thus far from the five demonstration projects:

- **Expedited procurement**
- **Improved risk allocation**
- **Encouraged applications of new technology**
- **Promoted accountability through a single point of contact**
- **Accelerated schedules for project delivery**
- **Reduced costly change orders**
- **Facilitated partnering**
- **Strengthened program management**
- **Facilitated opportunities for innovative finance**
- **Secured bids based upon factors other than lowest price.**

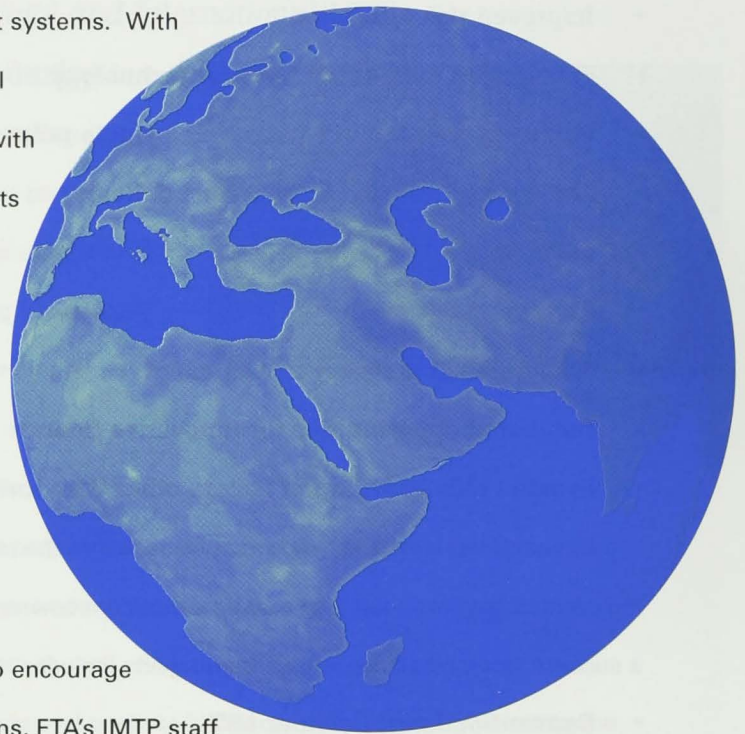


Design Build is making important inroads into the transit industry. In fact, six of 12 "Projects Recommended" for new Full Funding Grant Agreements are designed as "Design-Build" — a success story, by all accounts. The projects include:

- **Denver Southeast Corridor LRT**
- **Minneapolis Hiawatha Corridor LRT**
- **NJ Hudson-Bergen LRT (MOS-2)**
- **Salt Lake City CBD to University LRT**
- **Seattle Central Link LRT (MOS)**
- **Washington, DC Largo Extension**

International Mass Transportation Program

FTA officially launched the International Mass Transportation Program (IMTP) on September 15, 1999. Since then, the IMTP has engaged in activities in all four of its program areas: **intergovernmental agreements, technology/information exchange, human capacity building and U.S. industry trade support.** FTA has signed cooperation agreements with its counterparts in **France; Parana, Brazil; Germany; Thailand; Malaysia; and Singapore**, as well as with the **U.S. Department of Commerce** and the **American Public Transportation Association (APTA).** The IMTP has organized missions to France and Germany to learn more about their transit systems. With the United States Agency for International Development, it has worked extensively with the **Nigerian city of Lagos**, as it attempts to develop public transportation for its 12 million people by providing training modules, on-the-job training programs and technical assessments. In cooperation with the Department of Commerce, FTA Acting Administrator Fernandez led a transit trade mission to **Thailand, Malaysia and Singapore.** To encourage exports from small and medium-sized firms, FTA's IMTP staff developed and published "**Accessing the Global Marketplace: A Resource Guide for the Transit Industry.**" These activities have helped strengthen the U.S. transit system and U.S. transit suppliers by introducing innovations and ideas to U.S. operators and by assisting U.S. firms export transit-related goods and services.



Transit Cooperative Research Program (TCRP)

The Transit Cooperative Research Program was established in 1992 to provide a continuing program of applied research on transit issues. The program is sponsored by FTA and carried out under a three-way agreement among the National Academies of Science, acting through its Transportation Research Board (TRB); the Transit Development Corporation, an educational and research arm of the American Public Transportation Association (APTA); and the FTA.

The TCRP is an industry-driven program focusing on issues significant to the transit industry, with emphasis on developing near-term research solutions to a variety of transit problems. The selection of research projects is the responsibility of a committee consisting of transit industry executives, representing the primary beneficiaries of TCRP research. This committee functions

as the TCRP governing board and sets research priorities.

Since the program's inception, **259 projects have been authorized, covering a wide range of topic areas including operations, engineering of vehicles and facilities, service concepts, policy, planning,**

human resources, maintenance, safety and administrative practices. Approximately 180 of these projects have been completed, and their results have been disseminated throughout the transit industry through an arrangement with APTA.

An example of a recent accomplishment of the TCRP includes the development of **standards for systems and subsystems on transit rail vehicles.** This TCRP project is developing standards through the Institute for Electrical and Electronics Engineers (IEEE) and the American Society of Mechanical Engineers for use in the development of railcar purchase specifications. **Standards have been initiated in 15 different technical areas, with 8 standards to date formally published by the IEEE.** It has been estimated that **transit rail**



operators could save as much as \$120 million as a result of the development of uniform technical standards. The MTA New York City Transit has indicated that it has used the standards in recent railcar and signal system procurements. In addition, **New Jersey Transit** reported



that it will **save** approximately **\$420,000 per year** as a result of the **use of just one** of the standards developed by this effort.

Another example is the development of standard bus specifications for different types of heavy-duty transit buses using an industry-consensus process administered by APTA. To date, specifications have been prepared for heavy-duty low-floor, compressed natural gas and liquified natural gas transit buses.

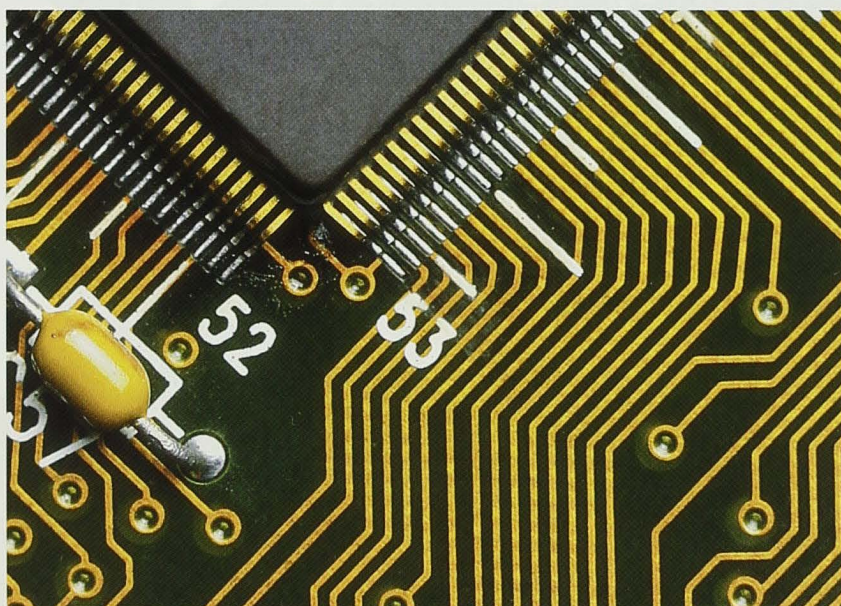
These specifications will assist transit systems in their purchase of buses, and will potentially result in lower purchase costs.

The development of a management toolkit for rural and small urban public transportation systems also is an example. This **toolkit identifies an array of management principles and techniques**, for use by **small urban and rural public transportation providers, to assist in managing** their transportation services more effectively.

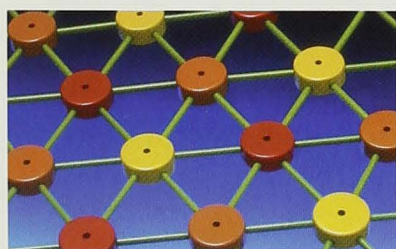
FTA has assisted our grantee and manufacturer customers by the development in 1996 of a **Best Practices Procurement Manual**, a joint effort between FTA and an industry task force. This collaborative effort developed a manual of procurement practices that the grantee community could use as a reference when conducting similar procurements. Guidance was incorporated to blend with actual procurement practices experienced in the transit industry. The manual is continually updated and published annually. The manual can be accessed on the Internet under www.fta.dot.gov, National Transit Library, Procurement.

Transit Intelligent Vehicle Initiative

In 1997, the US DOT merged all vehicle-focused Intelligent Transportation Systems (ITS) activities into a multi-agency research and development program entitled the "Intelligent Vehicle



Initiative" (IVI). The IVI emphasizes the significant and continuing role of vehicle operators in roadway safety and operations. The IVI is aimed at accelerating the development, availability, and use of driving assistance and control intervention systems to



reduce vehicle crashes. The IVI will also increase operational transportation efficiency. By integrating driving assistance and traveler information functions, **IVI systems will help vehicle operators process information,**



make decisions, and operate their vehicles more safely and effectively. There are four IVI platforms: transit buses, cars, trucks, and specialty vehicles (e.g., snow plows).



The Transit IVI element of the Departmental IVI Program has seen the completion of a needs assessment of technology applications to improve transit bus safety. Based on the needs



assessment, three projects were initiated to develop specifications for collision warning systems for the front, rear and sides of transit buses. Two prototype systems have been developed (Ann Arbor Transit Authority and Port Authority of Allegheny County) and final specifications are expected at the end of FY 2001. Additional projects are being planned to address **pedestrian safety and intersection safety.**

And again, what is it that our Federal investment in Mass Transit does for the Travelling Public?

When the Denver Regional Transportation District opened its Southwest Light Rail Line in July 2000, there was a story in the *Denver Post* about the opening and the thoughts of a Littleton, CO, woman named Barbara Sperry:

No more terrifying icy roads, traffic jams or pricey parking fees for Barbara Sperry. And best of all: a little quiet time. The Littleton claims adjuster is counting the blessings she anticipates with [the opening] of RTD's new South Santa Fe Drive Light Rail line. She can hardly wait to hop a train near her home and be whisked downtown in 22 minutes. 'I will just be able to sit and plan my day.' . . . On her first trip downtown, Sperry plans to wave a gleeful farewell to gas stations and their hiked rates, then settle back to think.

"I'll figure out my priorities and what I will be doing."

How we make life better for the travelling public—day by day! It's the small successes every day that count.



NOTES





<http://www.fta.dot.gov>



U.S. Department of Transportation

