

# Show Me...



# ...the Money



U.S. Department of Transportation  
**Federal Highway Administration**



**A Decision-Maker's Funding Compendium  
for Transportation Systems Management and Operations**

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# ACKNOWLEDGMENTS

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Local government advocates of the National Transportation Operations Coalition (NTOC) proposed creating a document to increase the awareness of the funding options that support transportation operations among state, regional and local decision-makers. The scope of the compendium would include existing transportation and non-transportation federal funding sources and provide success story examples on non-federal funding sources.

Special thanks to members of the PTI Transportation Council and others who contributed success stories and photos.

At PTI, Robert Hicks, Dale Bowen, and Laura Goodwin led the development of this publication. The NTOC action team, in particular Zia Burleigh and Jeff Lindley, FHWA, Valerie Kalhammer, AASHTO, Shelley Row, ITE and Joe Stapleton, URS Corp. provided valuable input and guidance. Bruce Schaller, who participated in the research and wrote the compendium. Walsh Graphics provided copyediting and design services.

PTI is the nonprofit technology R&D organization created by and for cities and counties. Since 1971, PTI has tapped the collective knowledge of its member jurisdictions and partnerships with private industry to create and advance technology-based products, services, and enterprises in cities and counties nationwide.

The Transportation Council guides PTI's Local Government Transportation Operations Outreach and Technology Transfer Program, which ties advanced transportation technology research, planning and implementation activities to the needs of local governments.

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**Dear Local Government Official,**

**Are you aware of the different funding options and innovative ways to fund the management and operations of your transportation system?**

**Show Me the Money: The Decision-Maker's Funding Compendium for Transportation Systems Management and Operations** is a document that will help you answer these and other questions related to identifying resources for your jurisdiction, state or region. This compendium was designed with the intent of educating decision-makers like you at the highest level within your organization.

We will introduce and demystify what is meant by the term “transportations systems management and operations” and provide examples of how this concept relates to maximizing operational capacity, minimizing impact of incidents, integrating elements of a multimodal system, maximizing safety, integrating the transportation system with attractive, livable communities and strategies that bring it all into being.

The compendium also offers helpful information on existing federal funding sources and provides examples of programs that are eligible to receive these funds.

After that, we will reveal some creative non-federal funding approaches to transportation funding being used across the nation.

And finally, this compendium highlights twenty-two case studies citing how state and local governments combine different funding resources to meet the needs of diverse transportation programs.

We hope you enjoy reading this compendium and that it may serve as a model for your agency.



**Dr. Alan R. Shark, Executive Director  
Public Technology Institute**





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## WHAT IS “MANAGEMENT AND OPERATIONS”?

During the post-World War II era of interstate construction and suburbanization, transportation activities were viewed as falling into two categories: “construction” and “operations and maintenance.” Construction brought highly visible improvements to the public’s transportation experience. The interstate system, new bridges and widening and improvement of major arterial roads made auto travel faster, easier and more convenient.

“Operations and maintenance” during this period referred to the routine work necessary for day-to-day use of highways, roads and bridges – work such as pothole repair, street repaving, snow and ice removal, toll collection, traffic signal maintenance. These activities were and are vital to keeping the transportation network functioning smoothly, but were not thought of as improving personal mobility or the ease or convenience of auto travel. The solution to traffic congestion and delay was found in construction, rather than operations.

Of necessity, this prevailing assumption has proven to be false as construction of new highways spans years while Americans are using their cars more than ever. The average person traveled 8,323 miles per motor vehicle in 2001, an increase from 7,081 miles per person in 1990. This 16% increase from 1990 to 2001 followed a 15% increase in vehicle miles traveled per person from 1977 to 1990.<sup>1</sup>

Meanwhile, highway construction has lagged far behind traffic growth. The number of highway lane miles increased by only 1.3 percent from 1993 to 2000, while total vehicle miles traveled on U.S. highways increased by 20.5 percent.<sup>2</sup>

This imbalance has generated predictable results. “Freeways” no longer evoke the allure of wide-open roads but rather the delays, inconvenience, and uncertainty of interminable traffic congestion. The Texas Transportation Institute esti-

<sup>1</sup> U.S. Department of Transportation, “Summary Statistics on Demographic Characteristics and Total Travel, 1969, 1977, 1983, 1990, and 1995 NPTS, and 2001 NHTS,” available: [http://nhts.ornl.gov/2001/html\\_files/trends\\_ver6.shtml](http://nhts.ornl.gov/2001/html_files/trends_ver6.shtml)

<sup>2</sup> Federal Highway Administration, 2002 Status of the Nation’s Highways, Bridges, and Transit: Conditions & Performance, page 2-11.

mates that a trip that would take 20 minutes during non-peak, non-congested conditions typically requires 27 minutes during the peak period of travel. Two-thirds of all peak-period auto travel in metropolitan areas takes place under congested conditions, compared with one-third of peak-period travel twenty years ago.<sup>3</sup>

Congestion is no longer restricted to the traditional “rush hour” nor to large metropolitan areas. In big cities, rush hour has extended from two or three hours per day to five or six hours as commuters attempt to avoid rush-hour congestion. Congestion levels in medium-size metropolitan areas now resemble the congestion once experienced only in large metro areas, while small cities now have sizeable rush hours of their own.

The concept of transportation operations has changed to meet these new circumstances. Federal transportation legislation incorporates the concept of Transportation Systems Management and Operations (TSM&O), which focuses on “operating” highways and roadways so as to move the most number of people as quickly as possible.

So what does it mean to “operate” a highway or bridge, aside from collecting tolls or removing snow? Figure 1 summarizes six operational goals focused on enhancing mobility and the value of the transportation system in the community.

The first two mobility goals focus on maximizing the functional capacity of the existing physical infrastructure.

Maximizing operational capacity focuses on reducing the impact of “recurring” delays – congestion that occurs at the same time and place, day in and day out. Traffic signal coordination, ramp metering and traveler information systems and other programs listed in Figure 1 can increase vehicle throughput without expanding the number of lanes of traffic.

Minimizing impact of incidents focuses on “non-recurring” or “incident” delays – congestion produced from accidents, vehicular breakdowns, debris in the road and other abnormal occurrences that cause a temporary blockage or otherwise affect traffic flow. Incident management systems, traveler information and other activities can minimize the length of the blockage and its impact on traffic flow.

<sup>3</sup> Texas A&M University System, Texas Transportation Institute, The 2004 Urban Mobility Report, page 1.

**1 >> MAXIMIZING OPERATIONAL CAPACITY**

- > Traffic signal coordination and timing
- > Traffic signal priority
- > Transit signal priority
- > Ramp metering
- > Intersection design
- > High Occupancy Vehicle lanes
- > High Occupancy Toll lanes
- > Bus Rapid Transit
- > Traveler information systems
- > Freight management
- > Traffic management centers
- > Transit management centers
- > Traveler information systems
- > Incident management systems
- > Special events management
- > Emergency response management

**2 >> MINIMIZING IMPACT OF INCIDENTS**

**3 >> INTEGRATING ELEMENTS OF A MULTIMODAL SYSTEM**

- > Integrated deployment of Intelligent Transportation Systems

**4 >> MAXIMIZING SAFETY**

- > Work zone safety
- > Traffic calming
- > Street design
- > Context-sensitive design
- > Transit-oriented design
- > Parking management
- > Curbside delivery management
- > Smart growth
- > Planning

**5 >> INTEGRATING THE TRANSPORTATION SYSTEM WITH ATTRACTIVE, LIVABLE COMMUNITIES**

**6 >> BRINGING IT ALL INTO BEING**

- > Performance measurement
- > Interagency coordination and collaboration

A landmark feature of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) was its new focus on intermodalism, the concept that auto, transit, ferry and other modes should be viewed as an integrated, multimodal transportation system. Integrated deployment of Intelligent Transportation Systems (ITS) technologies is vital to integrated operation and use across modes.

The importance of maximizing safety speaks for itself, for both travelers and workers. The importance of safety has grown as more of the transportation infrastructure increasingly requires repair, rehabilitation, or replacement while in continuous 24/7 operation.

ISTEA also brought increased recognition and intensified focus on integrating the transportation system with attractive, livable communities, with relevant activities listed in Figure 1.

Finally, operating a transportation system that is integrated across modes and integrated into the community, and that is operated with real-time responsiveness to changing traffic, weather and other conditions, requires a high level of interagency planning, coordination and collaboration.

Transportation operations is clearly vital to the ability of the transportation system to meet the public's mobility needs. Transportation operations has a direct and visible impact on the speed and reliability of travel, and thus on people's ability to get where they want to go, when they want to arrive. Adequate funding for transportation operations is increasingly important in an intensively time-sensitive society, yet money is often scarce, and locating and obtaining funding is a major challenge for local and state governments. This report is aimed at providing information and illustrations of successful approaches to funding transportation operations.

This section offers helpful information on several sources of federal funding that exist for local governments. Explanations of purpose, eligibility and process for each program should be helpful in determining which programs are most appropriate given the situation and need at hand. Examples and websites are also provided.

## 1. NATIONAL HIGHWAY SYSTEM (NHS)

**PURPOSE:** Funding for improvements to rural and urban roads that are part of the NHS, including the Interstate System and designated connections to major intermodal terminals. Under certain circumstances, NHS funds may also be used to fund transit improvements in NHS corridors.

**ELIGIBILITY FOR OPERATIONS:** Operating costs for traffic monitoring, management, and control systems, such as integrated traffic control systems, incident management programs, and traffic control centers, are eligible for Federal reimbursement from National Highway System and Surface Transportation Program funding.

Operating costs include labor costs, administrative costs, costs of utilities and rent, and other costs, including system maintenance costs, associated with the continuous operation of the system.

**PROCESS TO OBTAIN FUNDING:** Projects are identified and prioritized by MPOs and state DOTs. Projects must be included in the Transportation Improvement Program (TIP) developed by each MPO and the statewide TIP approved by the state DOT.

**CONTACT:** <http://ops.fhwa.dot.gov/travel/Ops-guide.htm>

### EXAMPLES

- >> Installation and integration of the Intelligent Transportation Systems Infrastructure
- >> Operating cost and expenses for traffic monitoring, management, and control
- >> Routine maintenance items that are not critical to the successful operation of the system, such as the painting of traffic signal controller cabinets, would normally fall outside of eligible operating costs



## 2. SURFACE TRANSPORTATION PROGRAM (STP)

**PURPOSE:** Flexible funding that may be used by states and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors.

**ELIGIBILITY FOR OPERATIONS:** Operating costs for traffic monitoring, management, and control systems, such as integrated traffic control systems, incident management programs, and traffic control centers, are eligible for Federal reimbursement from National Highway System and Surface Transportation Program funding.

Operating costs include labor costs, administrative costs, costs of utilities and rent, and other costs, including system maintenance costs, associated with the continuous operation of the system.

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**CONTACT:** <http://ops.fhwa.dot.gov/travel/Ops-guide.htm>





## EXAMPLES

**Some of the types of Federal-aid projects that may be funded include the installation and integration of the Intelligent Transportation Systems Infrastructure such as:**

- >> Planning for regional management and operations programs
- >> Traffic signal control systems
- >> Freeway management systems
- >> Incident management systems
- >> Multimodal traveler information systems
- >> Transit management systems
- >> Electronic toll collection systems
- >> Electronic fare payment systems
- >> Railroad grade crossing systems
- >> Emergency services
- >> Implementation of the national ITS architecture for metropolitan and rural areas
- >> Development of regional ITS architecture

## EXAMPLES

**Some examples of typical Federal-aid capital improvement projects that may include eligible operating costs include:**

- >> System integration
- >> Telecommunications
- >> Reconstruction of buildings or structures that house system components
- >> Control/management center (construction) and system hardware and software for the projects
- >> Infrastructure-based Intelligent Transportation System capital improvements to link systems to improve transportation and public safety services
- >> Dynamic/Variable message signs
- >> Traffic signals

## EXAMPLES

### Some examples of typical eligible operating cost and expenses for traffic monitoring, management, and control include:

- >> Labor costs
- >> Administrative costs
- >> Costs of utilities and rent
- >> Other costs associated with the continuous operation of the above-mentioned facilities and systems
- >> System maintenance (activities to assure peak performance)
- >> Replacement of defective or damaged computer components and other traffic management system hardware (including street-side hardware).
- >> Computer hardware and software upgrades to remedy Year 2000 (Y2K) problems.



### 3. CONGESTION MITIGATION AND AIR QUALITY (CMAQ) IMPROVEMENT PROGRAM

**PURPOSE:** Funds transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards (NAAQS) for ozone and carbon monoxide (CO). TEA-21 also allows CMAQ funding to be expended in particulate matter (PM) nonattainment and maintenance areas.

**ELIGIBILITY FOR OPERATIONS:** For projects located in air quality non-attainment and maintenance areas, CMAQ funds may be used for operating costs for a 3-year period, so long as those systems measurably demonstrate reductions in traffic delays.

Operating costs include labor costs, administrative costs, costs of utilities and rent, and other costs, including system maintenance costs, associated with the continuous operation of the system.

**PROCESS TO OBTAIN FUNDING:** CMAQ funds are controlled by the MPO and the State DOT. Funds are available to government and non-profit organizations and private entities contributing to public/private partnerships.

All projects must come from the latest air-quality conformance plan and TIP.

The project proposal must document how the project will provide emissions benefits before CMAQ eligibility is determined. Wherever possible, a quantitative emissions reduction estimate should be presented, although certain project categories, such as public education, marketing, or other outreach efforts are not easy to assess quantitatively. Instead, for these projects, a logical explanation of the emission reduction contribution and air quality benefit may be acceptable.

**CONTACT:** <http://www.fhwa.dot.gov/environment/cmaqpgs/> and especially <http://www.ops.fhwa.dot.gov/travel/Ops-guide.htm>

#### EXAMPLES

- >> Transit and public transportation programs
- >> Traffic flow improvements
- >> Travel demand management strategies
- >> Ride sharing programs
- >> Pedestrian and bicycle programs
- >> Education and outreach
- >> Inspection and maintenance programs
- >> Extreme cold start programs
- >> Alternative “clean” fuels

#### 4. ENHANCEMENT PROGRAM

**PURPOSE:** Federally funded, community-based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of the transportation infrastructure

**ELIGIBILITY FOR OPERATIONS:** Includes pedestrian and bicycle safety and educational activities.

**PROCESS TO OBTAIN FUNDING:** Apply to state department of transportation. State, county, city and municipal governing bodies with authority to tax are eligible applicants.

**CONTACT:** <http://www.enhancements.org/>

#### EXAMPLES

- >> Bicycle Awareness Campaign
- >> Bicycle and Pedestrian Injury Prevention Program



## 5. FTA – URBANIZED AREA FORMULA GRANTS (SECTION 5307 – URBANIZED)

**PURPOSE:** Funding for transit capital and operating assistance in urbanized areas and for transportation-related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the Bureau of the Census.

**ELIGIBILITY FOR OPERATIONS:** For urbanized areas with populations under 200,000, funds may be used to finance transit operating costs. In general, operating assistance is no longer available to urbanized areas with populations of 200,000 and over. However, funds may be used for maintenance (as well as acquisition, construction, improvement) of equipment and facilities for use in transit. Funds may also be used for the operating cost of providing ADA complementary paratransit service.

**PROCESS TO OBTAIN FUNDING:** Projects and operating expenses must be included in an urbanized area's transportation improvement program (TIP), and in the Statewide transportation improvement program (STIP) approved by FTA and FHWA.

For urbanized areas with 200,000 in population and over, Urbanized Area Formula Program funds are apportioned and flow directly to a designated recipient(s) selected locally to apply for and receive Federal funds. For urbanized areas under 200,000 in population, the funds are apportioned to the Governor of each state for distribution.

**CONTACT:** [http://www.fta.dot.gov/937\\_ENG\\_HTML.htm](http://www.fta.dot.gov/937_ENG_HTML.htm)

### EXAMPLES

- >> Maintenance of transit facilities and equipment
- >> Operating costs of ADA complementary paratransit services





## 6. FTA – NONURBANIZED AREA FORMULA GRANTS (SECTION 5311)

**PURPOSE:** To enhance the access of people in nonurbanized areas to health care, shopping, education, employment, public services and recreation; to assist in the maintenance, development, improvement, and use of public transportation systems in rural and small urban areas.

**ELIGIBILITY FOR OPERATIONS:** May be used for operating expenses including maintenance.

**PROCESS TO OBTAIN FUNDING:** Projects and operating expenses must be included in an urbanized area's transportation improvement program (TIP), and in the Statewide transportation improvement program (STIP) approved by FTA and FHWA.

**CONTACT:** [http://www.fta.dot.gov/941\\_ENG\\_HTML.htm](http://www.fta.dot.gov/941_ENG_HTML.htm)

### EXAMPLE

- >> Maintenance and other operating expenses



## 7. FTA – ELDERLY AND PERSONS WITH DISABILITIES PROGRAM (SECTION 5310)

**PURPOSE:** Improve mobility for the elderly and persons with disabilities throughout the country.

**ELIGIBILITY FOR OPERATIONS:** Most funds are used to purchase vehicles, but acquisition of transportation services under contract, lease or other arrangements and state program administration are also eligible expenses. Examples of such eligible public bodies are a county agency on aging or a public transit provider which that state has identified as the lead agency to coordinate transportation services funded by multiple Federal or state human service programs.

**PROCESS TO OBTAIN FUNDING:** States apply for funds on behalf of local private non-profit agencies, public bodies that certify to the governor that no nonprofit corporations or associations are readily available in an area to provide the service, and public bodies approved by the state to coordinate services for elderly persons and persons with disabilities.

**CONTACT:** [http://www.fta.dot.gov/grant\\_programs/specific\\_grant\\_programs/4226\\_ENG\\_HTML.htm](http://www.fta.dot.gov/grant_programs/specific_grant_programs/4226_ENG_HTML.htm)

### EXAMPLES

- >> Preventive maintenance, defined as all maintenance costs
- >> Microcomputer hardware and software
- >> Lease of equipment when lease is more cost effective than purchase
- >> Acquisition of transportation services under a contract, lease, or other arrangement



## 8. FTA – JOB ACCESS/REVERSE COMMUTE (SECTION 3037)

**PURPOSE:** To develop transportation services to connect welfare recipients and low-income persons to employment and support services.

**ELIGIBILITY FOR OPERATIONS:** Job Access grants may be used to finance operating costs of equipment, facilities and associated support costs related to providing access to jobs. The Reverse Commute grants assist in funding the costs associated with adding reverse commute bus, train, or carpool service from urban, rural and other suburban locations to suburban work places.

**PROCESS TO OBTAIN FUNDING:** Applications are submitted to the appropriate FTA Regional Office.

**CONTACT:** [http://www.fta.dot.gov/grant\\_programs/specific\\_grant\\_programs/4339\\_ENG\\_HTML.htm](http://www.fta.dot.gov/grant_programs/specific_grant_programs/4339_ENG_HTML.htm)

### EXAMPLES

#### >> Job Access grants

- >Capital and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs
- >Costs of promoting the use of transit by workers with nontraditional work schedules, promoting the use of transit vouchers, and promoting the use of employer-provided transportation including the transit benefits.

#### >> Reverse Commute grants

- >Operating costs, capital costs and other costs associated with reverse commute by bus, train, carpool, vans or other transit service



# CREATIVE APPROACHES TO TRANSPORTATION FUNDING

Through a scan of the various sources of funds offered in this section, readers can explore ways that other jurisdictions have used creative approaches to transportation funding. More helpful details on the case studies that are cited here are listed in the next section.

## USER FEES AND TOLLS

SOURCE OF FUNDS	CASE STUDY PROJECT	CITATION
TRUCK FEES	Illinois DOT uses user fees to pay for preclearance system for weigh stations	Illinois Commercial Vehicle Pre-clearance for Weigh Stations Case Study – page 27
PARKING METERS AND PUBLIC OFF-STREET PARKING FACILITIES	Los Angeles Special Parking Revenue Fund is used for maintenance and operation of parking meters and facilities	Los Angeles Special Parking Revenue Fund Case Study – page 30
SURPLUS PARKING GARAGE REVENUE	Minnesota/PASS 394 HOT Lane Project used surplus parking garage revenue from facilities associated with this corridor, among other funds, to convert HOV lanes to variable toll lanes for single-occupant vehicles	Minn./PASS 394 HOT Lane Project Case Study – page 32
TURNPIKE TOLLS	NJ Turnpike Authority's Traffic Operations Center is financed through the collection of tolls	New Jersey Turnpike Authority's Traffic Operations Center Case Study – page 35

SOURCE OF FUNDS		CASE STUDY PROJECT	CITATION
DEVELOPMENT FEES	Developers pay fees into Developer Impact Mitigation Fee Trust Fund. Los Angeles DOT uses revenue for traffic signal system design and construction, transit and other projects.	Los Angeles Developer Impact Mitigation Fees Case Study – page 29	
DEVELOPMENT FEES	New developments pay their pro rata share of the costs of transportation improvements necessitated by that development.	Montgomery County Transportation Impact Tax – page 34	
TRANSPORTATION UTILITY FEES	Ten Oregon cities and counties have adopted fees based on an allocation of recurring roadway maintenance costs to all development located within the jurisdiction. Costs are assigned based on road usage, trip intensity or estimated vehicle-miles.	Carl D. Springer and John Ghilarducci, “Transportation Utility Fee: The Oregon Experience,” paper presented at Transportation Research Board Annual Meetings, January 2004	
THE CLIMATE TRUST (CO <sup>2</sup> OFFSET BANK)	Portland Traffic Signal Retiming used CO <sup>2</sup> offset credits, created based on the amount of CO <sup>2</sup> saved due to signal retiming, to fund traffic signal retiming projects. Portland is paid for the CO <sup>2</sup> offset credits by The Climate Trust, a non-profit organization that banks CO <sup>2</sup> offset credits for power plant programs.	Portland (Ore.) Traffic Signal Retiming Case Study – page 36	
TOLL REVENUE BONDS AND OTHER SOURCES	Proposal to build two high-occupancy toll (HOT) lanes in each direction on a 14-mile segment of the Capital Beltway, using toll revenue bond issuance, a loan from USDOT under the TIFIA program, and a contribution from the governmental sponsors.	Capital Beltway HOT lanes PPTA Project Case Study – page 22	

**PUBLIC/PRIVATE PAYMENT OR IN-KIND SUPPORT IN EXCHANGE FOR SERVICES OR INFORMATION**

SOURCE OF FUNDS		CASE STUDY PROJECT		CITATION	
TRAFFIC REPORTING COMPANY	Tucson Regional Transportation Control Center receives personnel services and advertising time from Metro Networks in exchange for traffic information.	OFFICE SPACE PROVIDED BY BASEBALL CLUB	S.F. Giants club provides space inside ballpark for Transportation Management Center that is used to manage ballpark traffic.	Tucson Regional Transportation Control Center Case Study - page 41	Bruce Schaller, "Building Effective Relationships Between Central Cities and Regional, State and Federal Agencies," (Washington: Transportation Research Board. 2001) National Cooperative Highway Research Program Synthesis Report 297. Available: <a href="http://gulliver.trb.org/bookstore/">http://gulliver.trb.org/bookstore/</a>
TRAFFIC REPORTING COMPANY	Private vendor gains access to State Freeway right of way to install vehicle detection system and, in exchange, provides traveler information to Caltrans.	CITIZENS BANK	Citizens Bank co-promotion with SEPTA was tied to the bank's opening of several hundred new branch offices in Philadelphia. Citizens Bank underwrote free rides and paid SEPTA \$355,000 in exchange for access to SEPTA stations and promotional activity.	Caltrans Mobility Technologies Case Study - page 24	Bruce Schaller, "Transit Advertising Sales Agreements," (Washington: Transportation Research Board. 2004) Transit Cooperative Research Program Synthesis Report 51. Available: <a href="http://www.tcrponline.org">www.tcrponline.org</a>
INDIAN TRIBE	Wintun Tribe in Yolo County, California, funds over 30 percent of well-fare-to-work transit service to the Cache Creek Indian Casino.				Robert Cervero and Yu-Hsin Tsai, "Job Access and Reverse Commute Initiatives in California: A Review and Assessment," paper presented at Transportation Research Board Annual Meetings, January 2003

CASE STUDY PROJECT		CITATION
SOURCE OF FUNDS		
ADVERTISING REVENUE	Texarkana Urban Transit District receives revenue from advertising on buses and vans for vehicle purchasing and operations expenses.	Texarkana Urban Transit District Case Study - page 40
NORFOLK SOUTHERN RAILROAD	Mississippi DOT/ Norfolk Southern Rail Crossings Corridor Project, to signalize public highway/rail grade crossings in Mississippi, was funded jointly by MS DOT and Norfolk Southern Railroad.	Mississippi DOT/ Norfolk Southern Rail Crossings Corridor Project Case Study - page 33
UTILITY COMPANY	Local utilities defrayed event costs for New York City Clean Fuels Forums.	Bruce Schaller, "Building Effective Relationships Between Central Cities and Regional, State and Federal Agencies," (Washington: Transportation Research Board, 2001) National Cooperative Highway Research Program Synthesis Report 297. Available: <a href="http://gulliver.trb.org/bookstore/">http://gulliver.trb.org/bookstore/</a>
WILLIAM PENN FOUNDATION	William Penn Foundation provided grant to develop Walk Philadelphia signage system.	Bruce Schaller, "Building Effective Relationships Between Central Cities and Regional, State and Federal Agencies," (Washington: Transportation Research Board, 2001) National Cooperative Highway Research Program Synthesis Report 297. Available: <a href="http://gulliver.trb.org/bookstore/">http://gulliver.trb.org/bookstore/</a>
INSURANCE COMPANY	Commerce Insurance Company has sponsored Mass. CaresVan motorist assistance program, with funds to be used for expansion of the program.	Massachusetts CaresVan Program Case Study - page 31
INSURANCE COMPANY	Intersection improvements funded by grant from insurance company.	Anchorage Intersection Operational and Safety Studies Case Study - page 21

## PUBLIC FUNDS

SOURCE OF FUNDS	CASE STUDY PROJECT	CITATION
<p><b>PORT OF SEATTLE</b></p>	<p>Seattle City Center ITS Project received funding from the Port of Seattle.</p>	<p>Seattle City Center ITS Project Case Study – page 38</p>
<p><b>CMAQ</b></p>	<p>CMAQ funds were obtained to help fund the Frankfort, Ky Transportation Operations Center, based on the percentage of vehicle miles traveled (VMT) in Kentucky that are in non-attainment areas.</p>	<p>Frankfort, Ky. Transportation Operations Center Case Study – page 26</p>
<p><b>STP, CMAQ AND STATE FUNDS</b></p>	<p>The Spokane Regional Transportation Management Center is a partnership venture of transportation agencies in the region. The project involves the construction and operation of a regional TMC, shared by the partner agencies, a communication backbone, and field devices.</p>	<p>Spokane Regional Transportation Management Center Case Study – page 39</p>
<p><b>CMAQ</b></p>	<p>The Vancouver Area Smart Trek (VAST) program is a cooperative effort by transportation agencies in Clark County that developed and is cooperating to fund and implement the twenty-year VAST Implementation Plan.</p>	<p>Vancouver Area Smart Trek Program Case Study – page 42</p>
<p><b>WATER MANAGEMENT GRANTS</b></p>	<p>Enhanced corridor using Southwest Florida Water Management grant money and matching funds.</p>	<p>Clearwater North Greenwood Corridor Enhancement Project Case Study – page 23</p>
<p><b>DEVELOPER MITIGATION FUNDS, GENERAL FUND, GAS TAX, COUNTY FUNDS</b></p>	<p>Combination of discretionary capital transportation funds (state and local) used to incrementally build computer-based traffic signal control system.</p>	<p>Los Angeles Automated Traffic Surveillance and Control Center Case Study – page 28</p>





THIS NOTE IS LEGAL TENDER  
FOR ALL DEBTS, PUBLIC AND PRIVATE



ANCHORAGE INTERSECTION OPERATIONAL AND SAFETY STUDIES

**DESCRIPTION**

Conduct intersection operational and safety studies for 5 high-accident intersections. The studies identified accidents and trends; road engineering safety concerns and countermeasures; economic evaluation of countermeasure cost/benefits; and recommended immediate and long-term plans of action to be implemented.

**INNOVATIVE FINANCING**

Utilized grant funds awarded by a nation-wide insurance company.

**DATES**

2002-03

**OPERATIONAL AREAS**

Traffic Signal Control Systems >> Traffic calming

**PARTICIPATING AGENCY**

Municipality of Anchorage Traffic Department

**FEDERAL FUNDING SOURCES**

Other

**S/R/L FUNDING SOURCES**

Private sector sources



**CONTACT**

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## CAPITAL BELTWAY HOT LANES PPTA PROJECT

### DESCRIPTION

Fluor Daniel proposes to build two high-occupancy toll (HOT) lanes in each direction on a 14-mile segment of the Capital Beltway, from north of the Springfield Interchange to north of the Dulles Toll Road. According to the proposal, HOT lanes would be free to carpoolers, buses and emergency vehicles; cars carrying only one or two people would pay a variable toll to use the lanes. Large trucks would not be allowed to use HOT lanes.

### INNOVATIVE FINANCING

Preliminary plan of finance relies on a capital markets toll revenue bond issuance, a loan from USDOT under the TIFIA program, and a contribution from the governmental sponsors.

### DATES

As of publication in 2005, in planning stages

### OPERATIONAL AREAS

Electronic Toll Collection Systems >> HOV lanes >> Carpool, vanpool

### PARTICIPATING AGENCIES

Virginia DOT >> Metropolitan Washington Council of Governments (MWCOC) >> Fairfax County >> Washington Metropolitan Area Transit Authority (WMATA) >>

### FEDERAL FUNDING SOURCES

See description

### S/R/L FUNDING SOURCES

Tolls >> See description



### CONTACT

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## CLEARWATER NORTH GREENWOOD CORRIDOR ENHANCEMENT PROJECT

### DESCRIPTION

Transformed a corridor with streetscaping, traffic calming and construction of the Martin Luther King, Jr., Roundabout.

### INNOVATIVE FINANCING

By moving up the timeframe for bringing reclaimed water to an African-American community and re-routing the RCW alignment to go down the major street, we used Southwest Florida Water Management grant money, plus matching money, to obtain \$850,000 to tear up the street, put in the line and restore it. However, instead of restoring it to the original condition, for an incremental cost we restored it to the enhanced condition.

### DATES

2001/2003

### OPERATIONAL AREAS

Traffic calming

### PARTICIPATING AGENCIES

Southwest Florida Water Management >> City of Clearwater

### FEDERAL FUNDING SOURCES

Other

### S/R/L FUNDING SOURCES

General fund



### CONTACT

Ken Sides, PE  
Transportation Projects Engineer  
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## CALTRANS MOBILITY TECHNOLOGIES

### DESCRIPTION

Private vendor gains access to state freeway right-of-way to install vehicle detection system.

### INNOVATIVE FINANCING

State does not own or operate the equipment. We get data that we have agreed not to share openly. The vendor sells the data to the major media markets to finance the maintenance and operations of their detection system.

### DATES

Currently in deployment

### OPERATIONAL AREAS

Traveler Information Systems

### PARTICIPATING AGENCIES

Caltrans >> SANDAG

### FEDERAL FUNDING SOURCES

Other

### S/R/L FUNDING SOURCES

Gas tax



### CONTACT

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**DESCRIPTION**

Fort Smith Transit operates four core fixed routes and 4 paratransit/demand response routes from 5 am until 7 pm Monday-Friday and from 8 am to 7 pm on Saturday. To assist the fixed route system during peak hours we provide three expansion routes. Night service is also available Monday through Friday from 7 pm to 11:20 pm.

**INNOVATIVE FINANCING**

Our base local match funding (21%) comes from a percentage of the city's allocated county sales tax apportionment. The city provides more funds to help support the night service. Through the state we receive 5% of our local match funding through a rental car sales tax program. The remaining 9% comes from a combination of fares and other sources including mobile advertising proceeds, gas tax refunds and charterers/shuttles.

**DATES**

Our system was new in 1996 with 4 buses. More were added as system demand grew. In September 2001, we added 5 buses as part of an expansion program; today we have a fleet of 18 buses.

**OPERATIONAL AREAS**

Development of Regional ITS Architecture >> Bicycle and pedestrian facilities and programs >> Transit vehicle purchasing >> Transit vehicle maintenance >> Transit service operating costs >> Electronic Fare Payment Systems >> Emergency Services

**PARTICIPATING AGENCIES**

Arkansas State Highway and Transportation Department >> Bi-State Metropolitan Planning Organization >> City of Fort Smith >> City of Sebastian >> Fort Smith Transit >> Bridges To Opportunities

**FEDERAL FUNDING SOURCES**

FTA - Urbanized area formula grants >>  
FTA - Job Access/Reverse Commute

**S/R/L FUNDING SOURCES**

General fund >> Specialized taxes (oil company, mortgage recording, auto rental, etc.) >> Transit fares >> Gas tax >> County funds

**CONTACT**

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Fort Smith Transit  
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**DESCRIPTION**

The Transportation Operations Center collects and disseminates road condition information statewide for incident management, freeway management, and traveler information. It will also be the central repository for our traffic signal system management software. Information comes in from our highway districts, the state police, Kentucky Vehicle Enforcement, our regional operations centers and our road weather information system (RWIS) units. The information goes to the public via the web site, 511, and kiosks in our rest areas. This information is also shared with the state's emergency operations center as needed.

**INNOVATIVE FINANCING**

There was no money for this project when the idea was formed. To get some available Federal Congestion Mitigation and Air Quality (CMAQ) funding to get the project started, Kentucky Transportation Cabinet staff calculated the percentage of vehicle miles traveled (VMT) in air quality non-attainment areas in Kentucky, versus the statewide VMT and justified that this percentage (about 25%) of the project was eligible for CMAQ funds. FHWA agreed and that amount of funding was set up to start the project. The remainder was funded through earmarks, state matches and toll credits.

**DATES**

The project began in 2002. The Transportation Operations Center is now operational although portions are still being integrated and we are already exploring expansion.

**OPERATIONAL AREAS**

Traffic Signal Control Systems >> Freeway Management Systems >> Incident Management Systems >> Traveler Information Systems

**PARTICIPATING AGENCIES**

Kentucky Transportation Cabinet

**FEDERAL FUNDING SOURCES**

Federal Aid - CMAQ >> Other

**S/R/L FUNDING SOURCES**

Toll credits >> Gas tax



Leon Walden

Transportation Engineer Specialist

Kentucky Transportation Cabinet

859-564-3020

leon.walden@ky.gov

**CONTACT**



## ILLINOIS COMMERCIAL VEHICLE PRE-CLEARANCE FOR WEIGH STATIONS

### DESCRIPTION

Commercial vehicle pre-clearance for weigh stations.

### INNOVATIVE FINANCING

This is a public / private partnership that uses user fees to pay for the installation, maintenance and management of a preclearance system at truck weigh stations and uses transponders to pay highway and bridge tolls.

### DATES

Illinois DOT has been a member of PrePass since October, 2000.

### OPERATIONAL AREAS

Other (vehicle pre-clearance)

### PARTICIPATING AGENCIES

24 state members

### S/R/L FUNDING SOURCES

Gas tax >> Private sector sources



### CONTACT

Richard Landis  
President  
HELP Incorporated  
602/412-2240  
[www.prepass.com](http://www.prepass.com)

**DESCRIPTION**

ATSAC is a computer-based traffic signal control system that monitors traffic conditions and system performance (using pavement detectors and closed-circuit television cameras), selects appropriate signal timing (control) strategies, and performs equipment diagnostics and alert functions. In addition, the program includes a web-based traveler information system. The program is being implemented at the 4,400 signalized intersections in the City of Los Angeles.

**INNOVATIVE FINANCING**

Through a Call for Projects Program, administered by the Los Angeles County Metropolitan Transportation Authority (MTA), discretionary capital transportation funds (state and local) are made available for regionally significant projects.

**DATES**

This program began operation in 1984 and implementation continues today, advancing in specific geographic stages throughout the city. As of publication in 2005 approximately 70% of the city's signalized intersections are on-line and functioning with full ATSAC capability.

**OPERATIONAL AREAS**

Traffic Signal Control Systems >> Traveler Information Systems

**PARTICIPATING AGENCIES**

California Dept. of Transportation (Caltrans) >> Southern California Association of Governments (SCAG) >> City of Los Angeles >> Los Angeles County Metropolitan Transportation Authority (MTA)

**FEDERAL FUNDING SOURCES**

Federal Aid - Surface Transportation Program

**S/R/L FUNDING SOURCES**

Developer Mitigation Funds >> General fund >> Gas tax >> County funds >> General sales tax >> Transportation sales taxes

**CONTACT**

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## LOS ANGELES DEVELOPER IMPACT MITIGATION FEES

<b>DESCRIPTION</b>	Developers who want to have their development projects approved are required to pay fees into the Developer Impact Mitigation Fee Trust Fund.
<b>INNOVATIVE FINANCING</b>	Funds are used to fund the design and construction of the city's computerized traffic signal system, changeable message signs, traffic calming projects, purchasing of vehicles for local transit service, and as a contribution for a street widening project.
<b>DATES</b>	Program was started in 1992 and is a continuing program.
<b>OPERATIONAL AREAS</b>	Traffic Signal Control Systems >> Traffic calming >> Transit vehicle purchasing >> Traveler Information Systems
<b>PARTICIPATING AGENCIES</b>	City of Los Angeles
<b>S/R/L FUNDING SOURCES</b>	Interest income >> Impact fees



### CONTACT

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## LOS ANGELES SPECIAL PARKING REVENUE FUND

### DESCRIPTION

The Special Parking Revenue Fund is comprised of funds collected from money deposited in parking meters and revenue from public off-street parking facilities.

### INNOVATIVE FINANCING

By city ordinance, these funds can be used for maintenance, operation, etc. of parking meters, purchase, lease, construction, operation and maintenance of off-street parking facilities in the city.

### DATES

Program was started in 1972 and is a continuing program.

### OPERATIONAL AREAS

Parking management >> Electronic Fare Payment Systems

### PARTICIPATING AGENCIES

City of Los Angeles

### S/R/L FUNDING SOURCES

Bond proceeds >> Interest income



### CONTACT

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## MASSACHUSETTS CARESVAN PROGRAM

### DESCRIPTION

The CaresVan Program is a motorist assistance program that provides free roadside assistance to stranded motorists on limited access highways in and around Massachusetts. The program covers 22 routes (17 in metropolitan Boston, 4 in Worcester and 1 in Springfield). The CaresVan program is an integral part of MassHighway's incident management program.

### INNOVATIVE FINANCING

The program is funded with 80% FHWA CMAQ monies and 20% state funds at a cost of \$2.2 million per year. Once the system was operational a Request for Response was advertised to bring on a marketing firm at no cost. The marketing firm was tasked with finding a corporate sponsor for the program. In August 2003, Commerce Insurance Company agreed to sponsor the program for \$525,000 per year for the next three years, with an additional 2 year option. This money is currently going to the Commonwealth of Massachusetts general fund, however, paperwork has been filed to allow the money to be rolled back into the program. If this is successful, it will allow for the program to be expanded by 3 routes.

### DATES

Commerce Insurance sponsorship is from August 2003 to August 2006, with an additional 2 year renewal option.

### OPERATIONAL AREAS

Other (motorist assistance program)

### PARTICIPATING AGENCIES

MassHighway

### FEDERAL FUNDING SOURCES

Federal Aid - CMAQ

### S/R/L FUNDING SOURCES

Insurance company

### CONTACT

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MassHighway  
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## MINNESOTA/PASS 394 HOT LANE PROJECT

### DESCRIPTION

Converting current HOV lanes, both reversible barrier separated and striped diamond lanes, to variable toll lanes for single occupant vehicles.

### INNOVATIVE FINANCING

The financing is from federal ITS funds, surplus parking garage revenue from facilities associated with this corridor, and private sector contributions.

### DATES

Project was expected to be full operational in 2005.

### OPERATIONAL AREAS

Freeway Management Systems >> Electronic Toll Collection Systems >> HOV lanes

### PARTICIPATING AGENCIES

Minnesota Department of Transportation >> Metropolitan Council >> Metro Transit

### FEDERAL FUNDING SOURCES

Other

### S/R/L FUNDING SOURCES

Accumulated surplus parking garage revenues >> Tolls >> Private sector sources



### CONTACT

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## MISSISSIPPI DOT/ NORFOLK SOUTHERN RAIL CROSSINGS CORRIDOR PROJECT

### DESCRIPTION

Project developed to signalize all public highway/rail grade crossings on Norfolk Southern in the state of Mississippi.

### INNOVATIVE FINANCING

Funding was a public/private partnership with the Mississippi DOT funding 70% and Norfolk Southern 30%.

### DATES

Project began in February 1999 and was completed in the first quarter of 2004.

### OPERATIONAL AREAS

Other (railroad grade crossing systems)

### PARTICIPATING AGENCIES

Mississippi DOT >> FHWA

### FEDERAL FUNDING SOURCES

Other

### S/R/L FUNDING SOURCES

Optional Safety Funds >> Norfolk Southern



### CONTACT

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Steve Edwards  
Rails Engineer  
MS DOT

## MONTGOMERY COUNTY TRANSPORTATION IMPACT TAX

### DESCRIPTION

The Development Impact Tax Program requires a new development to pay its pro rata share of the costs of transportation improvements necessitated by that development in conjunction with other public funds. The impact tax must be paid prior to issuance of Building Permit for residential, office, industrial, retail, places of worship and private schools.

### INNOVATIVE FINANCING

Impact Tax was created as a mechanism to fund improvements and activities that relate to capacity and has been used to fund infrastructure projects. Revenues for the next several years are dedicated to constructing the Montrose Parkway. In the future, however, projects such as the county's automated transportation management system (ATMS), to build the intelligent infrastructure for managing and operating the system, will be funded from this source.

### DATES

Program adopted in the late 1980s.

### OPERATIONAL AREAS

See above regarding use for automated transportation management system components

### PARTICIPATING AGENCIES

Montgomery County >> City of Gaithersburg >> City of Rockville

### S/R/L FUNDING SOURCES

Impact Fees



### CONTACT

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## NEW JERSEY TURNPIKE AUTHORITY'S TRAFFIC OPERATIONS CENTER

- DESCRIPTION** NJ Turnpike Authority's Traffic Operations Center
- INNOVATIVE FINANCING** Financed through the collection of tolls.
- DATES** January 1976
- OPERATIONAL AREAS** Freeway Management Systems >> Incident Management Systems >> Emergency Services >> HOV lanes
- PARTICIPATING AGENCIES** NJ Turnpike Authority
- S/R/L FUNDING SOURCES** Tolls



### CONTACT

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## PORTLAND TRAFFIC SIGNAL RETIMING USING CLIMATE TRUST FUNDING VIA CO<sup>2</sup> OFFSET CREDITS

### DESCRIPTION

The project includes retiming 170 traffic signals in Oregon (81 in City of Portland; 31 outside Portland by Oregon DOT; and 58 by Washington County).

### INNOVATIVE FINANCING

The Climate Trust is an Oregon non-profit organization created to track and bank CO<sup>2</sup> offset credits for power plant program. We are receiving \$3.44/ton of CO<sup>2</sup> saved due to signal retiming. The fuel savings from signal retiming are converted into CO<sup>2</sup> reduction. We are using the Synchro timing model to compute the before-after savings in fuel. We are receiving 10 years' worth of savings for each retiming project. The project is covering about 80% of our costs.

### DATES

Oct. 2003

### OPERATIONAL AREAS

Traffic Signal Control Systems

### PARTICIPATING AGENCIES

Oregon DOT >> City of Portland >> Washington County >> The Climate Trust

### S/R/L FUNDING SOURCES

CO<sup>2</sup> credits



### CONTACT

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## SCHUYLKILL EXPRESSWAY CORRIDOR TSM DEVELOPMENT PROGRAM

### DESCRIPTION

Transportation System Management (TSM) is an approach for using transportation facilities more efficiently through public transportation, regulatory, pricing, management, operations, and traffic engineering strategies. TSM promotes ridesharing, transit improvements, and technology-based solutions, e.g., dynamic message signs and traffic signal coordination, to increase traffic efficiency, particularly during expressway incidents. By improving exchange of information among agencies, PENNDOT, SEPTA, and local municipalities can react more effectively to incidents along the Schuylkill Expressway to minimize the impact of incidents on local service and streets.

### INNOVATIVE FINANCING

First stages of project are 80% federal and 20% state funded. The 80% federal portion was a federal earmark secured by the Montgomery County planning commission and SEPTA (local transit authority). The ensuing project implementation will proceed based on available federal, state, and local funding, i.e., coordinated signal systems within municipalities and townships.

### DATES

Project began in October 2002.

### OPERATIONAL AREAS

Traffic Signal Control Systems >> Transit Management Systems >> Freeway Management Systems >> Incident Management Systems

### PARTICIPATING AGENCIES

PENNDOT >> Delaware Valley Regional Planning Commission (DVRPC) >> Montgomery County Planning Commission >> City of Philadelphia >> Boroughs of Bridgeport, Conshohocken, Narberth, Norristown, & West Conshohocken >> Townships of East Norriton, Lower Merion, Plymouth, Radnor, Upper Merion, & Whitemarsh >> Montgomery & Philadelphia County 911 Centers >> Southeastern Pennsylvania Transit Authority (SEPTA) >> FHWA

FEDERAL FUNDING SOURCES  
Federal Aid - CMAQ

S/R/L FUNDING SOURCES  
General fund

### CONTACT

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## SEATTLE CITY CENTER ITS PROJECT

### DESCRIPTION

City-wide ITS Enhancements including a project in an industrial/port area to facilitate freight movement.

### INNOVATIVE FINANCING

Contribution from public authority, Port of Seattle.

### DATES

2005 to 2006

### OPERATIONAL AREAS

Traffic Signal Control Systems >> Ferry operations >> Transit Management Systems >> Intermodal freight >> Traveler Information Systems >> Railroad Grade Crossing Systems

### PARTICIPATING AGENCIES

Washington State DOT >> Seattle DOT >> Metro Transit >> Port of Seattle

### FEDERAL FUNDING SOURCES

S/R/L FUNDING SOURCES Private sector sources >> Property taxes



### CONTACT

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## SPOKANE REGIONAL TRANSPORTATION MANAGEMENT CENTER AND ITS INFRASTRUCTURE

### DESCRIPTION

The Spokane Regional Transportation Management Center is a partnership venture. The partners are: the city of Spokane, the city of Spokane Valley, Spokane County, Spokane Regional Transportation Council, Spokane Transit Authority, and the Washington State Department of Transportation. The project involves the construction and operation of a regional TMC, shared by the partner agencies, a communication backbone, and field devices.

### INNOVATIVE FINANCING

Funds have been allocated from federal STP and CMAQ as well as state-only funds. In addition, each partner agency has contributed to the effort.

### DATES

Partnership was developed in 1998 and continues.

### OPERATIONAL AREAS

Traffic Signal Control Systems >> Development of Regional ITS Architecture >> Transit Management Systems >> Freeway Management Systems >> Incident Management Systems >> Traveler Information Systems

### PARTICIPATING AGENCIES

Washington State Department of Transportation >> Spokane Regional Transportation Council >> City of Spokane >> City of Spokane Valley >> Spokane County >> Spokane Transit Authority

### FEDERAL FUNDING SOURCES

Federal Aid - Surface Transportation Program >> Federal Aid - CMAQ

### S/R/L FUNDING SOURCES

Gas tax

### CONTACT

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## TEXARKANA URBAN TRANSIT DISTRICT

### DESCRIPTION

The goal was to provide Fixed-Route and ADA Paratransit service for Texarkana, Tex.; Texarkana, Ark.; Wake Village, Tex.; and Nash, Tex.

### INNOVATIVE FINANCING

Advertising on the rear and sides of the Fixed Route Vehicles.

### DATES

Began service on October 30, 2000.

### OPERATIONAL AREAS

Transit Management Systems >> Transit vehicle purchasing >> Transit vehicle maintenance >> Transit service operating costs >> Fare subsidies

### PARTICIPATING AGENCIES

Texas Dept. of Transportation >> Arkansas Highway and Transportation Dept.. >> Texarkana Metropolitan Planning Organization >> Texarkana, TX >> Texarkana, AR >> Wake Village, TX >> Nash, TX >> Texarkana Urban Transit District

### FEDERAL FUNDING SOURCES

FTA - Urbanized area formula grants

### S/R/L FUNDING SOURCES

Charters >> General fund >> Transit fares



### CONTACT

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## TUCSON REGIONAL TRANSPORTATION CONTROL CENTER

### DESCRIPTION

Tucson provides a model for public-private partnership cooperation through its landmark partnership with METRO Networks and the city in the operation and maintenance of the regional control center.

### INNOVATIVE FINANCING

METRO Networks reporters, by contract, have instant access to all traffic information. In exchange, METRO Networks provides the regional center operating personnel, flight time, commercial prime-time slots for transportation announcements, and other services.

### DATES

1998

### OPERATIONAL AREAS

Traffic Signal Control Systems >> Development of Regional ITS Architecture >> Transit Management Systems >> Freeway Management Systems >> Transit service operating costs >> Incident Management Systems >> Traveler Information Systems

### PARTICIPATING AGENCIES

Arizona Department of Transportation >> Pima Association of Governments >> City of Tucson >> Pima County >> Suntran (transit agency) >> METRO Networks

### FEDERAL FUNDING SOURCES

Other

### S/R/L FUNDING SOURCES

Private sector sources >> METRO Networks

### CONTACT

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**DESCRIPTION**

The Vancouver Area Smart Trek (VAST) program is a cooperative effort by transportation agencies in Clark County that developed and is cooperating to fund and implement the twenty-year VAST Implementation Plan.

**INNOVATIVE FINANCING**

Over the last 3 years the VAST regional partners have committed regional Congestion Mitigation and Air Quality and local match funding of \$6.3 million for a set of projects that included the baseline development of a transportation management center for improving efficiency of freeway operations as well as cameras, detectors, and variable message signs connected to the transportation management center.

**DATES**

The VAST program was initiated in 1999 as a multi-agency regional effort. The pooled CMAQ funding began in 2000.

**OPERATIONAL AREAS**

Traffic Signal Control Systems >> Development of Regional ITS Architecture >>  
Transit Management Systems >> Freeway Management Systems >> Incident Management Systems >> Traveler Information Systems >> Transit Vehicle Maintenance

**PARTICIPATING AGENCIES**

Washington State Department of Transportation >> Southwest Washington Regional Transportation Council >> Cities of Vancouver and Camas >> Clark County >> C-TRAN

**FEDERAL FUNDING SOURCES**

Federal Aid - CMAQ

**S/R/L FUNDING SOURCES**

General fund >> Gas tax

**CONTACT**

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ADA	Americans with Disabilities Act of 1990
CMAQ	Congestion Mitigation and Air Quality
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HOT lane	High Occupancy Toll lane
HOV	High Occupancy Vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITS	Intelligent Transportation Systems
JARC	Job Access/Reverse Commute Program
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NHS	National Highway System
O&M	Operations and Management
PM	Particulate Matter
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TEA-21	Transportation Equity Act for the 21st Century
TIFIA	Transportation Infrastructure Finance and Innovation Act of 1998
TIP	Transportation Improvement Program
VMP	Vehicle Miles Traveled









# Show Me...*the Money*



U.S. Department of Transportation  
**Federal Highway Administration**

National Transportation Operations Coalition  
**NTOC**

**pti**  
Public Technology Institute

Public Technology Institute  
1301 Pennsylvania Avenue, N.W.  
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