



Federal Highway  
Administration

# **Financing the Statewide Plan: A Guidebook**

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## **I. The Role of Financial Planning in Statewide Planning**



Since the passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), state departments of transportation across the country have developed multimodal transportation plans. Yet, while their counterparts in metropolitan planning organizations were required by ISTEA to develop financially constrained long-range plans, state requirements for a financial component of the long-range planning process have been much less stringent. The Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) maintains these basic differences in financial planning requirements. Why should state departments of transportation nonetheless develop a thorough financial planning process as part of their long-range plans? If developed, what should it contain? What strategies are there to bridge the ubiquitous gap between projected revenues and perceived needs? What are the pitfalls and success factors planners developing statewide, multimodal, long-range transportation plans should consider? This handbook is designed to help answer these questions.

## II. Integrating Transportation Finance Into Statewide Planning



Statewide transportation planning provides a process that enables states to determine the characteristics of their preferred transportation system, “the Vision,” to define strategies and actions, and to establish priorities for moving towards that vision. Statewide plans require a clear link between planning and funding decisions if they are to be implemented. To be credible, plans must address finance and reflect fiscal realities even in visioning. Therefore, understanding the current and future finance environment and determining how elements of the plan will be financed are important aspects of statewide planning.

An effective planning process will set funding priorities. The needs analysis will shape budget and investment decisions. In an effective financial planning effort the budget process is the mechanism through which the overall plan is implemented rather than the most important factor guiding the planning process.

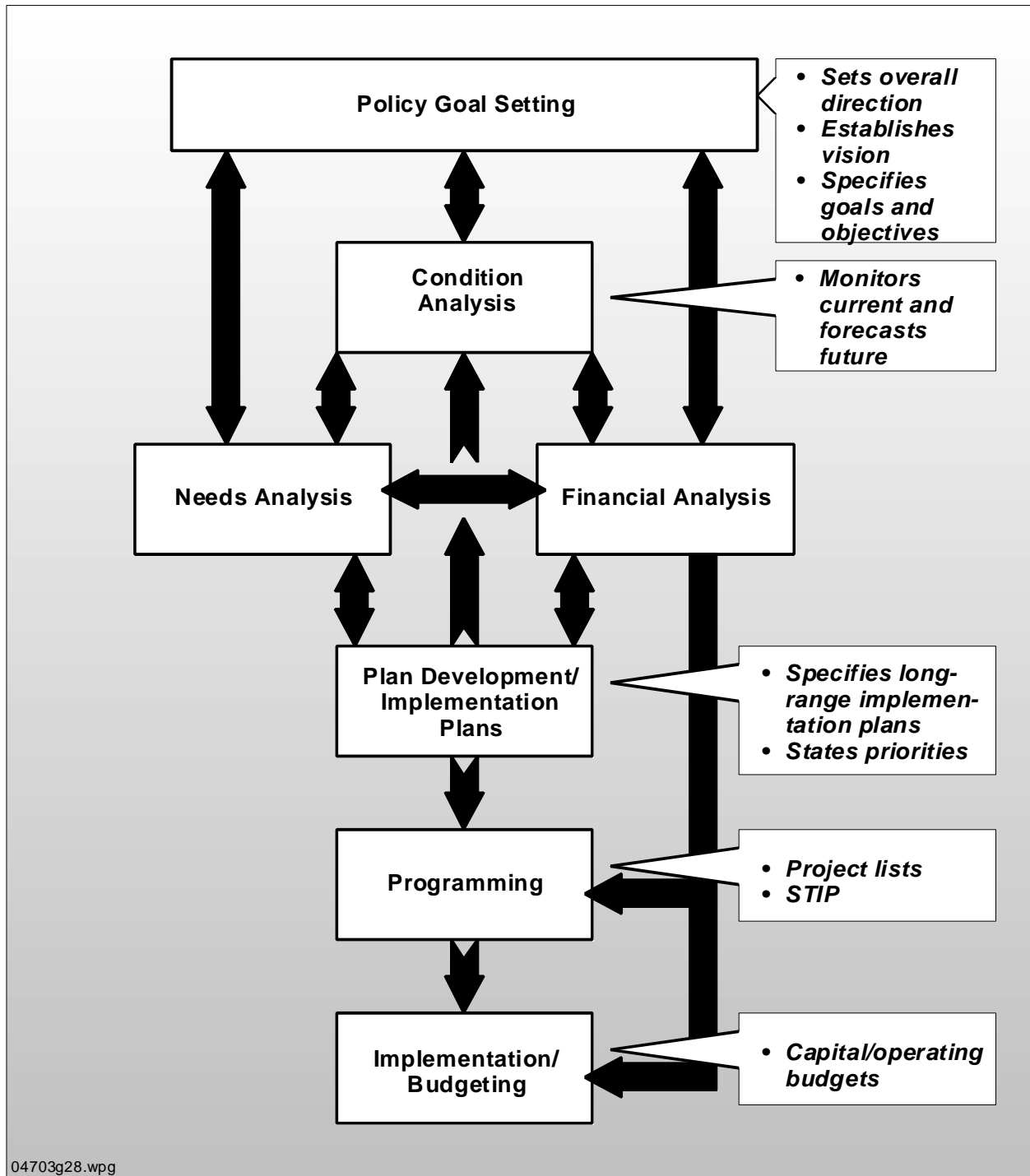
Exhibit II-1 illustrates how financial planning can be integrated into the policy and technical elements of statewide planning so that the planning process determines finance needs and strategies. The exhibit shows that financial planning provides both inputs into the statewide planning process and its products. Strategies for enhancing revenues and using innovative finance mechanisms may be part of the policy and goal setting process of the statewide plan. Financial analysis provides an input into the overall planning process.

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### **Integration of Financial Analysis Provides:**

- Ongoing policy consideration of funding needed to implement long-range plans
  - Ongoing process for determining long-range revenue needs and finance mechanisms
  - Ongoing process to build support for financial strategies that address long-range needs
  - Increased understanding of funding mechanisms and constraints
-

## Exhibit II-1: Financial Analysis in the Context of Statewide Planning



### III. The Policy Context for Transportation Finance



The previous section has shown that financial planning is an integral part of any successful statewide transportation plan. This section explores the policy context in which current approaches to transportation funding evolved. It shows the majority of funds that currently support transportation infrastructure at the state and federal level and why these sources were developed. These funding sources and the philosophy on which they are based provide the point of departure for all financial planning efforts.

Federal, state, and local transportation agencies share the responsibility to provide funds for transportation capital infrastructure. Federal funding is generally targeted towards the components of modal systems that have national importance, for example highways on the Interstate System or National Highway System or airports that are part of the National Plan of Integrated Airport Systems. Funding for state and local facilities not eligible for federal funding is the responsibility of state and local governments. In addition, state and/or local agencies must pay a share of transportation infrastructure that is supported by federal funds. For most programs funded under TEA-21, there is a 20 percent state or local participation requirement. This is to ensure that state or local governments evaluate carefully not only where to spend their own funding, but also any funding they receive from other public sources. This also means for states and local jurisdictions that they must ensure that these matching funds are available to guarantee that they will be able to use all federal appropriations.

Prior to TEA-21, the federal share of funding for transportation infrastructure had been declining, and states and local governments were often forced to take over responsibilities previously carried by the federal government. TEA-21 changed this by increasing federal funds for transportation by approximately 40 percent. In the future the downward trend may continue, however. Dramatic increases in demand, uncertainly about long-term federal aid funding, and growing competition for limited state and local funds, creates pressure for new and increased funding for transportation infrastructure at state and local levels of government. For these reasons, financial planning should be an important part of any statewide transportation planning effort.

#### A. User Fees

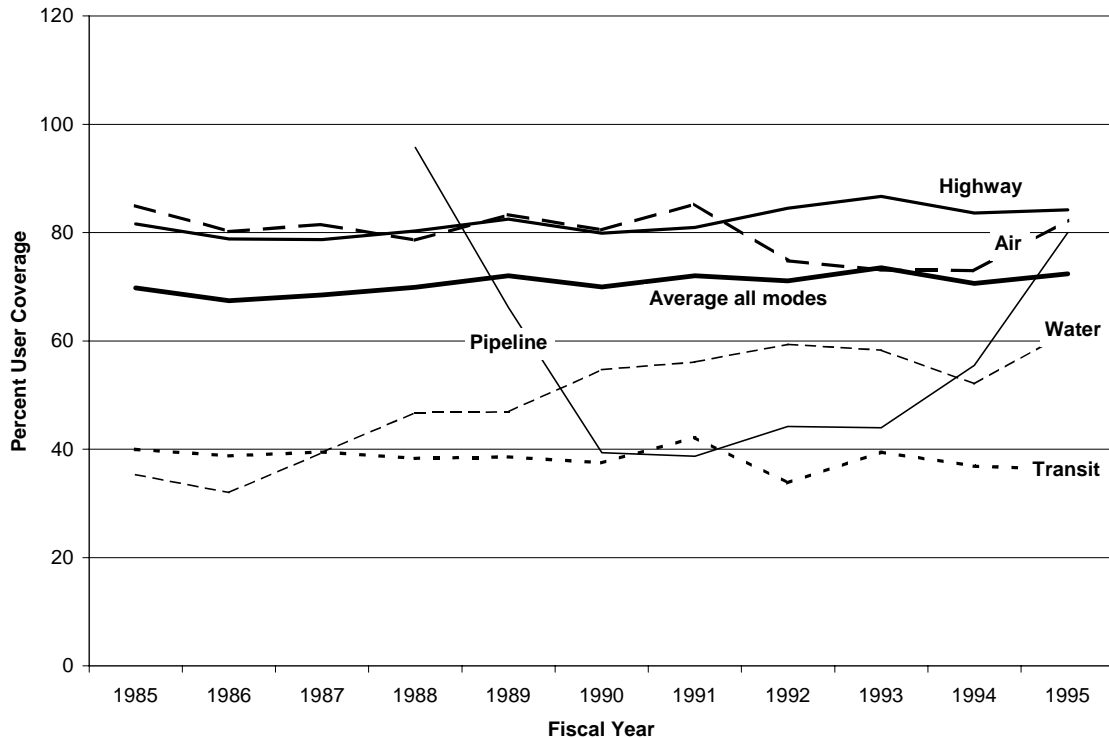
In the United States, state and federal governments mostly rely on user fees to generate revenue for transportation infrastructure and services. That means that those who use highways, air or seaports, or other modes of transportation pay the government for the provision of facilities and services. This is particularly true for highway users who pay for the “service” provided by state departments of transportation through motor fuel taxes, motor vehicle excise taxes, vehicle title or registration fees, and other fees. Similarly, taxes on aviation fuel, air freight, and passenger tickets provide revenue for airport preservation

and expansion projects. Dredging and other activities carried out by the Army Corps of Engineers to maintain the nation's waterways and ports are funded by fuel use and harbor maintenance taxes. The only exceptions are transit and nonmotorized transportation. Both receive funds from highway user fees at the federal level. Transit also receives funding from the general fund.

In general, federal and state governments seek to set user fees that are commensurate with the costs different types of users impose on the transportation system. Both at the state and federal level, the user fees that are collected from travelers are paid into special transportation funds that, to a large extent, are dedicated to the mode from which they were collected. This approach is taken because it is considered fair and equitable by most Americans: taxes and fees that directly support facilities used by those who pay for them. This helps to make them politically acceptable and enforceable. It also, at least in theory, helps ensure that the resource, that is transportation facilities, is used wisely.

There are differences between modes, however, in the extent to which user fees support the provision of facilities. Exhibit III-1 below illustrates the ratio of user revenues to expenditures for different modes and all levels of government between 1985 and 1995.

### **Exhibit III-1: Ratio of User Revenues (coverage ratio) to Expenditures by Mode**



Source: USDOT, Bureau of Transportation Statistics.



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## **B. Pay-as-You-Go Financing**

Transportation user fees at the federal and state level are largely spent on a pay-as-you-go basis. That means that most projects are funded with current revenues and governments do not borrow money to build these transportation facilities. The federal government does not issue any bonds, that is borrow money by pledging future revenues to pay off the debt, to fund current projects.

This issue has been the subject of debate both in the policy and the expert field. For some, deferring debt payments for facilities that we enjoy today is unfair to future generations that have no part in the decision. On the other hand, transportation facilities like a train station or freeway ramp are major capital investments that will serve more than one generation, like a house that is purchased on a mortgage. Therefore, the argument could be made that the cost of providing the facility should be spread across generations rather than paid by the one that identified the need.

## **C. Debt Financing**

The use of debt financing instruments varies across different types of government and projects. The federal government does not use debt financing to support its transportation infrastructure programs. At the state level, the use of bonds to develop transportation facilities varies. Some states use bonds only to a limited extent and some not at all. However, in recent years, interest in debt financing has increased. This is in part because today those projects that provide the greatest return on investment are often so expensive that a pay-as-you-go approach would force state and local agencies to choose between one or two such critical projects and most other necessary projects. Political pressures from those constituencies whose projects would not be funded usually prevent such projects from being built—unless they are funded through bonds and/or public-private partnerships. The federal government has recognized this issue and is providing opportunities for new approaches by allowing federal funds to be used as starting capital for state infrastructure banks or directly as credit for large projects of national importance.

To address a large backlog of needs, states have begun to look to debt financing secured by a range of revenue sources. They may for example use tolls rather than gas tax or general fund revenue for particularly costly transportation projects as a means to ensure that those who benefit from the new facility pay for its construction and operation. In addition, the decision to use debt financing mechanisms may also depend on projections for economic and population growth. A state with rapidly growing population and economic centers may find it prudent to invest in transportation infrastructure to prepare for future growth, knowing that revenues will increase with population and economic growth. A state with a stagnating population base and limited economic growth potential would more likely avoid debt that may take up a large portion of future revenues.

At the local level, debt financing of transportation infrastructure is more common. This is because at the local level, there is a perception that it is the local government's responsibility to address basic quality-of-life and economic issues. Bond issues fund not only highway projects but also transit centers providing an alternative option for travelers. Sea and airport improvements often receive general fund or bond revenues because they are seen as an investment in economic development that will benefit the entire community, not only those who use these facilities.

## **D. Addressing Social and Economic Issues**

User fees, pay-as-you-go, and debt financing approaches for funding transportation infrastructure and services have different social, economic, and environmental implications. These implications are generally considered during the development of funding strategies and options. For example, public transportation is the only mode for which revenues other than user fees are used to a significant degree by both federal and state governments in the United States. This is because public transportation provides mobility for disadvantaged groups of the population and an alternative choice for motorists, helping to limit some of the environmental costs of auto use.

At the local level, transportation facilities and services, in particular roadways, are often funded from the general fund. Air and seaports are often supported with public revenues dedicated to economic development. The same approach is used on a national and state basis in many European countries. The rationale behind this approach is that transportation facilities are a vital infrastructure component supporting growth and economic development that benefits the entire community and not only transportation users. Therefore, all tax payers contribute to the development and maintenance of these transportation facilities.

Increasingly, local jurisdictions in the U.S. are also using special benefit districts, special assessments, and impact fees to support transportation infrastructure. These mechanisms allow governments to recoup funds from those residents or businesses that benefit most or impose costs for the provision of transportation infrastructure on the entire community.

## **E. The Funding Gap**

The overview of current transportation funding sources and their underlying philosophies provided above has shown that governments use a variety of different approaches to fund transportation infrastructure in support of broader societal goals. Why should these obviously sound decisions be revisited?

A major problem that many states face today is that existing funding levels and funding sources are not sufficient to provide the revenue needed to maintain existing facilities and develop new capacity and/or provide alternatives such as transit, ride-sharing, intelligent transportation systems (ITS) to maintain service levels despite increased demand. Until the 1980s, the dedicated user fee approach to transportation finance generally served the United

States well and provided the necessary infrastructure. Since then, however, reluctance to increase these user fees to even keep up with inflation has caused a gap between funding needs and the availability of funds that, in many states, continues to widen. In the case of motor fuel taxes, the problem has been compounded by increases in fuel efficiency that reduce the purchasing power of these revenues even further.

Some states, among them Florida, have taken action to resolve this problem by indexing their taxes for inflation – that is, fuel taxes are raised at regular intervals to keep up with growing costs. In most states, legislatures have been reluctant to grant state departments of transportation this ability. Departments of transportation must therefore periodically request tax increases to recoup at least some of the revenue lost to inflation. While some states have been successful in raising their motor fuel taxes, many state departments of transportation have found it difficult to get tax increases in today's fiscal environment and have thus been forced to look for alternative revenue sources.

In most states that have been successful in securing revenue increases, the specific programs and projects to be funded are clearly identified. This provides direct accountability to the policy-makers regarding what the extra revenue will be used for.

## IV. Analyzing the Cost of Meeting Transportation Needs and Objectives



The needs analysis component of the planning process will determine the cost of meeting the goals and service objectives identified by the transportation plan. Planners will generally carry out a cost evaluation during each step of the needs analysis. The cost evaluation consists of the following steps:

### 1. Evaluation of the gap or deficiencies between plan goals or service objectives and existing and forecast conditions.

This step generally includes an estimate of the costs of raising existing and projected future conditions to meet plan performance standards and service objectives in a generic fashion. For the highway system, this may entail, for example, the use of the Highway Performance Monitoring System (HPMS) to determine what it would cost to maintain the state's facilities at the desired level of service.

### 2. Evaluation of alternative strategies and actions to address deficiencies.

At a higher level of detail, planners will determine the cost of implementing the plan. Generally, planners at this point will assess the impact of different investment levels on the condition and performance of the transportation system. Highway planners, for example, can again use HPMS to determine what physical condition and level of service can be expected at a specific level of investment. They may also determine to what extent policy goals like accessibility can be achieved based on different funding levels. This is often an iterative process during which planners work with decision and policy makers to determine which funding scenario is realistic; and the alternative plan scenarios often reflect to what extent plan goals can be achieved with varying funding levels. This requires an evaluation of both existing and potential funding, a process which will be described below.

### 3. Selection of strategies and actions.

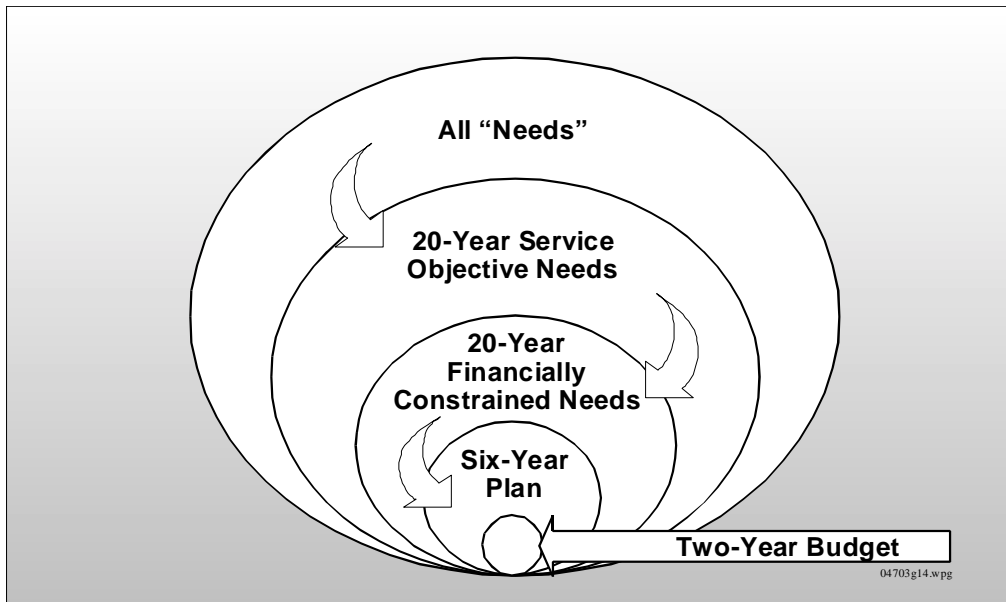
The last step in the needs analysis process is to decide which set of strategies and actions or plan scenario will be used to address the needs and implement the plan. The cost of implementing the chosen scenario is the cost of implementing the plan.

This process is difficult and complex. Cost figures are often not available with the same level of detail or reliability across modes or geographic areas. Financial planners at this stage often must rely on technical staff to evaluate conditions for individual modes, or may base their estimates on those obtained from local jurisdictions or individual transit agencies. To ensure that the cost evaluation is reliable and realistic, planners carrying out cost analysis for the statewide plan must:

- Ensure that the needs figures reflect the cost of meeting plan objectives and not some other set of objectives.
- Understand the nature of the cost figures, either aggregate costs or project costs, and the level of accuracy that is inherent in these different types of figures.
- Separate the portion of the cost of meeting the service objectives that is the department's responsibility from that of other transportation providers and partners.

Washington State's planners defined service objectives for all modes, and then developed service objective needs that provide information on the overall cost of implementing the plan. These service objective needs are based on the cost of projects and programs that are needed to meet a service objective, that is, eliminate existing or projected deficiencies for each mode. The statewide plan includes service objectives or needs for all modes, including those that are not owned or operated by the state. In doing so, Washington's planners noted that "the process of setting performance objectives excludes what may have historically been considered a 'need.'" Needs based on actual plan service objectives thus constitute a smaller subset of the universe of "needs," and those that can be addressed by available funding are a yet smaller portion of all "needs." Exhibit IV-1 illustrates the relationship between these different types of needs and different levels of detail for long, intermediate, and short term planning and programming.

### Exhibit IV-1: Washington's Needs Analysis Approach



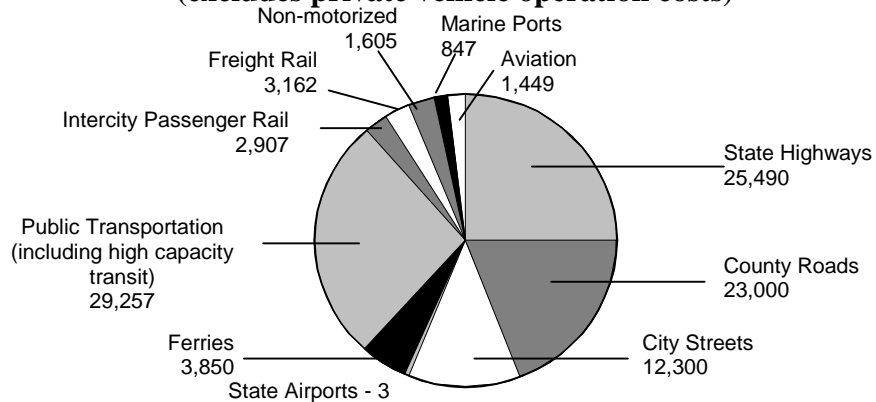
Source: Washington State Department of Transportation, Washington's Transportation Plan 1997-2016, 1996.

For the long-range planning process, service objective needs are often at the system or modal level and may therefore provide order-of-magnitude figures rather than a detailed project-oriented cost analysis. At the intermediate or short-term level the level of detail will increase, and they are more likely to be based on actual projects and project costs. For example, for the long range plan, preservation and capacity improvements figures for the state highway system may come from the HPMS, while the six-year plan will contain a list of preservation and capacity improvement projects for which the cost has been determined. Since the level of accuracy in the cost projections can have a significant impact on the cost figures, planners must strive to understand the nature and level of accuracy of the forecasts to develop appropriate financial strategies. Florida provides unit costs for different types of transportation infrastructure and acceptable inflation factors to assist in district, local, and regional sketch planning efforts and to standardize the assumptions on which high level needs figures are based.

In determining the cost of achieving the service objectives contained in Washington’s plan, the department looked at needs at the aggregate level based on historic expenditure trends for more traditional modes. This includes, for example, the cost of maintaining or operating the highway system. For transportation modes in which state investment is relatively new, like intercity passenger rail, the figures were based on projected costs for specific improvements. In the case of passenger rail, figures were based on a combination of track, train, and operating improvements in the corridor. For transit, reports developed to fulfill federal reporting requirements under TEA-21 can form the basis for a determination of the cost of maintaining the existing condition and service. Cost estimates for service expansion, or even the start of an entirely new system developed by individual transit agencies, can be integrated into the evaluation of costs for meeting plan goals with regard to this mode.

Exhibit IV-2 below illustrates the results of Washington’s needs analysis process for all modes and indicates the relative percentage of the cost of the plan that is attributed to each component of the transportation system. The cost of meeting the service objectives, developed through the process described above, over the entire planning time frame is \$103.9 billion.

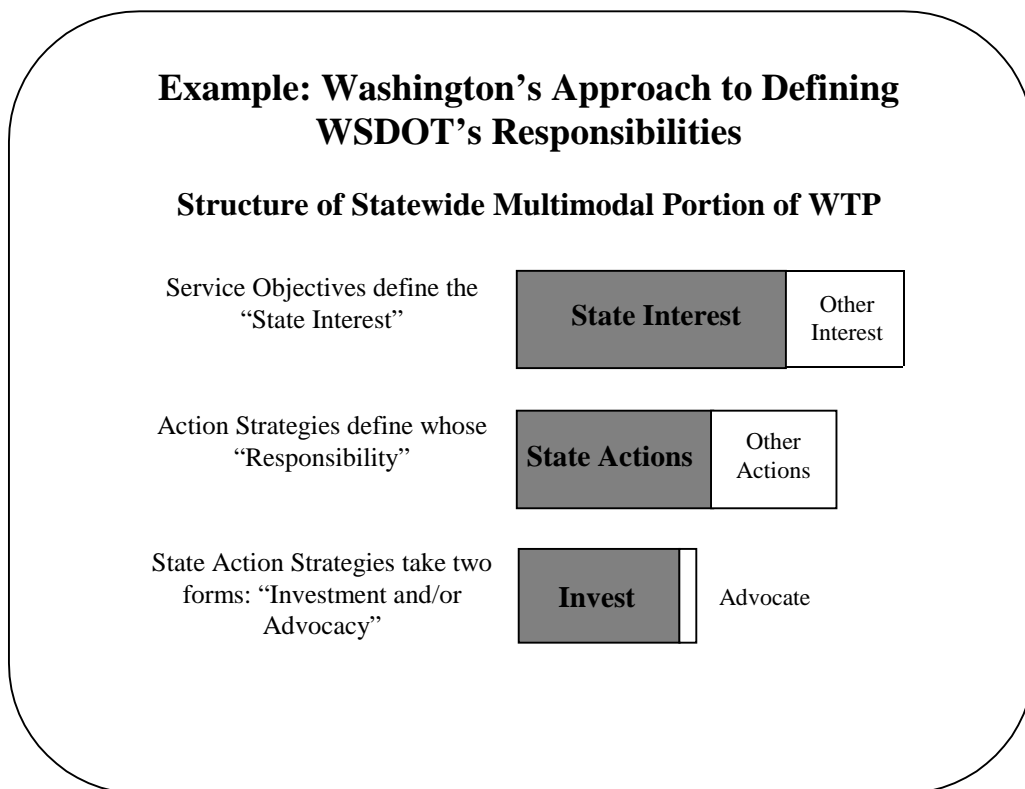
**Exhibit IV-2: WTP Service Objective Needs in \$ Millions**  
 (excludes private vehicle operation costs)



Source: Washington State Department of Transportation, Washington’s Transportation Plan 1997-2016, 1996.

A cost analysis that covers all modes, however, includes the cost of providing service and facilities for modes over which the department of transportation has no jurisdiction. To determine the level of funding that will be required from the state, planners must also determine what portion of the cost for individual modes will have to be paid by the department and what portions will be paid by other public and private sector partners. For example, the state's responsibility will be relatively high for the highway system but may include only an advocacy role for the freight rail system. Exhibit IV-3 illustrates how Washington State's planners determined what the department's responsibility will be.

### Exhibit IV-3: Washington's Approach to Defining WSDOT's Responsibilities



Source: Washington State Department of Transportation, Washington's Transportation Plan 1997-2016, 1996.

## V. Identifying Funding from Traditional Sources



Funding for transportation capital infrastructure is provided by all levels of government and by the private sector. This section describes the different funding sources that are generally available. It also provides some indication of the level of funding to be expected from these sources. For statewide planners carrying out financial planning, much of this information will be available from the finance or budget division of the department. State departments of transportation that use econometric models to forecast revenues for transportation will use this information as input into their modeling efforts. Planners responsible for individual modes will be familiar with the funding sources that support their modes, and can likely get information from transportation providers for modes which the department does not have direct authority over. Planners developing the financial component of the statewide plan should work with their colleagues in each relevant mode to identify the funding sources that are available.

---

***For statewide financial planning, it will be important to:***

- Identify the sources of funding at the federal, state, and local levels.
  - Determine the order of magnitude of funds from different revenue sources.
  - Understand the applicability of funds to different types of projects for given modes of transportation.
- 

### A. Overview of Funding Sources

The following summarizes funding sources used by the public sector to support transportation. It provides an overview of the different revenue generating tools and gives some information on the level of revenue that can be expected from these sources.

Funding for transportation facilities and services supported by the public sector comes from a variety of different sources. In particular, at the federal and state levels, user fees like motor fuel or motor vehicle excise taxes provide a large portion of funds. Some state and many local governments also use general fund revenue and bond sales to support transportation infrastructure. In recent years, public-private partnerships have been used increasingly by both state and local governments. Also, property, sales, and other taxes are often also a source of transportation revenue for local governments.



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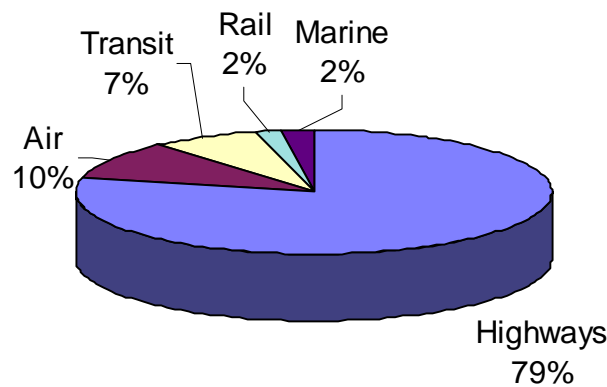
***Funds for transportation facilities and services come from a number of different sources, including:***

- User fees in the form of motor fuel taxes; motor vehicle excise taxes, registration, and license fees; air, transit, rail, or ferry fares; toll proceeds; and other taxes.
  - General fund appropriations.
  - Property, sales, or other taxes dedicated to transportation.
  - Bond sales.
  - Investment income.
  - Public/private partnerships.
- 

Federal, state, and local governmental entities share the responsibility to generate and provide revenue for transportation facilities and services. All three levels of government raise revenues to provide funding for highways, airports and airways, transit, rail, and seaports or waterways.

In 1997, federal, state, and local governments spent \$149 billion to fund facilities and services for all modes. Highways received the majority of public funds from all levels of government (79%). Air transportation was a distant second (10%), followed by transit (7%). Marine and rail transportation facilities are predominantly owned by the private sector and receive only a small part of public transportation funds. Exhibit V-1 illustrates the distribution of funds from all levels of government among modes in 1997.

**Exhibit V-1: Share of Government Expenditure by Mode in 1997**



Source: R. Wilson, Transportation in America, 16<sup>th</sup> ed., 1998.

The following outlines the sources of revenue that support transportation expenditures at the federal, state, and local levels.

## **B. Funding at the Federal Level**

In 1997, the federal government provided \$35 billion in funds for transportation infrastructure and services. Fifty-six percent (56%) of these funds supported programs for highways, 24 percent (24%) provided resources for airways and airports, eight percent (8%) supported transit programs, while seven percent (7%) and four percent (4%) provided funds for rail and marine transportation respectively.

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### ***In general, federal funds are:***

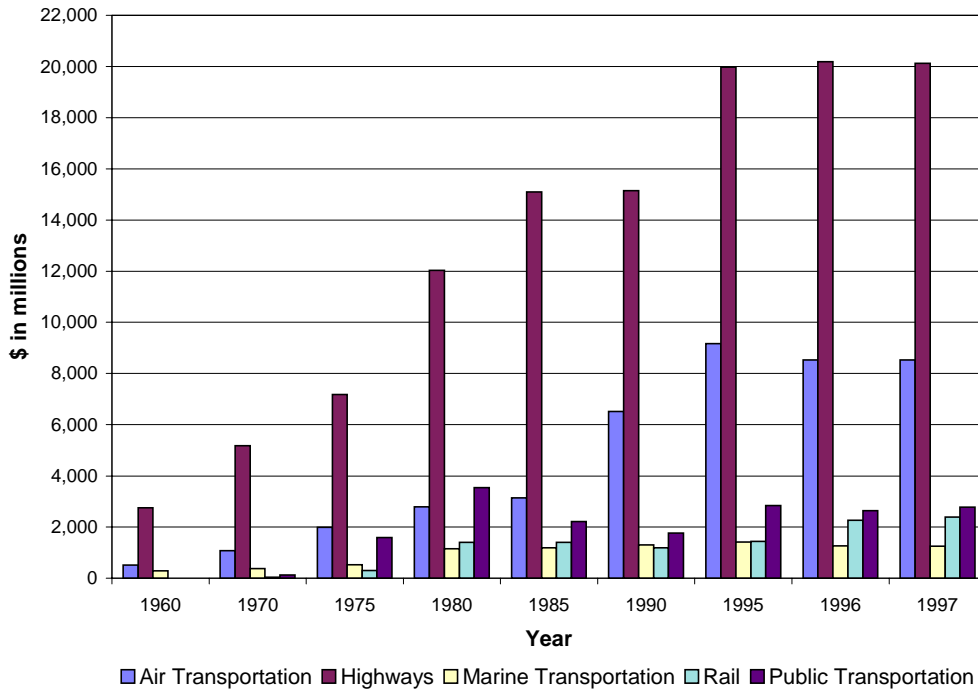
- More flexible across modes than in the past.<sup>1</sup>
  - Focused on highways and, to a lesser extent, air transportation.
  - Limited for public and marine transportation.
  - Based on user fees, in particular for highways and air transportation.
- 

Exhibit V-2, on the following page, illustrates federal expenditures for all modes from 1960 to 1997.

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<sup>1</sup> NHS funds may be used for transit improvements in NHS corridors; publicly owned intracity and intercity bus terminals; and infrastructure-based intelligent transportation system (ITS) capital improvements. Transit funds may be used for transit-related highway improvements. CMAQ funds may be used for Magnetic Levitation (MAGLEV) program projects.

### Exhibit V-2: Federal Expenditures by Mode



Source: R. Wilson, *Transportation in America*, 16<sup>th</sup> ed., 1998.

Some of these federal funds are provided to federal agencies. The Federal Aviation Administration receives funds for airway control activities, Amtrak to operate its trains, and the U.S. Army Corps of Engineers to maintain the nation’s ports and waterways in navigable condition. The majority of transportation funds, however, support programs that provide grants to reimburse state and local governments for transportation infrastructure and services.

User fees and taxes support most federal programs providing funds to state and local governments. Each program has a specific set of criteria and distribution mechanisms designed to support the national interest in the use of federal funds. The distribution mechanisms and criteria for the programs vary based on the mode and type of program. Criteria can include, for example, lane miles and vehicle miles traveled (VMT) on a state’s portion of the Interstate highway system or the population within the service area of an urban transit system.

However, since the passage of ISTEA in 1991 and, even more so, the passage of TEA-21 in 1998, the federal government has eased restrictions on the use of federal funds. State and local governments now have significant freedom in deciding for which mode(s) federal funds are to be used, particularly those from the Surface Transportation Program. Since funding under TEA-21 comprises the majority of federal funding for surface transportation, the following provides an overview of the major features of TEA-21.

## 1. Major Features of TEA-21

In spring of 1998, Congress passed new federal transportation legislation, TEA-21. TEA-21 guarantees \$198 billion, and authorizes \$218 billion in federal funds during 1998-2003. In a major change in federal budget rules, highway and transit programs are guaranteed a minimum level of funding. Under the new rules, highway program expenditures are tied to actual Highway Trust Fund receipts. Highway Trust Fund receipts can only be used to support eligible highway and transit programs and projects. TEA-21 continues the movement towards a more integrated, multimodal transportation system begun under ISTEA. In addition, there are a number of changes that provide new opportunities to fund transportation infrastructure for state and local governments. The following highlights central features of TEA-21 related to funding.

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### ***TEA-21:***

- Provides essentially the same basic program structure as the 1991 ISTEA.
  - For the first time, guarantees funding levels for both highways and transit, subject to annual appropriations.
  - Increases federal transportation funding to the states by about 40 percent.
  - Guarantees that each state will receive at least 90.5 percent of its contributions to the highway account of the Highway Trust Fund.
  - Further increases the flexibility in how federal funds can be spent and matched with local shares.
  - Continues to encourage and support innovative financing of transportation projects.
- 

## 2. Overview of Federal Transportation Programs

The federal government implements programs providing funding for all modes of transportation. Exhibit V-3 outlines the major programs and lists the funding sources for each of these programs.

### Exhibit V-3: Federal Transportation Programs and Revenue Sources

Mode	Major Federal Programs	Federal Revenue Sources
<b>Highways</b>	Interstate Maintenance National Highway System Bridge Replacement and Rehabilitation Congestion Mitigation and Air Quality Improvement Surface Transportation National Corridor Planning and Development and Coordinated Border Infrastructure High Priority (Demonstration) Projects Intelligent Transportation Systems Minimum Guarantee	Highway Trust Fund with funds from the federal: Motor fuel tax (15.44 cents/gallon of gasoline, varies for other fuel types) Truck and trailer tax Tire tax Heavy vehicle use tax
<b>Public Transportation</b>	Capital (Section 3009) Urbanized Area Formula (Section 3007) Other than urbanized Area Formula (Section 3014) Surface Transportation Program (portion) Congestion Mitigation and Air Quality Improvement (in air quality non-attainment and maintenance areas) Formula Grants for Special Needs of Elderly Individuals and Persons with Disabilities (Section 3013) Job Access and Reverse Commute Grants (Section 3037) Clean Fuels Formula Grants (Section 3008)	Mass Transit Account of the Highway Trust Fund: Motor fuel tax (2 cents/gallon) General Fund Interest
<b>Aviation</b>	Federal Airport and Airway Trust Fund: Airport development grants Airport planning grants	Aviation fuel tax Air freight tax Passenger ticket tax International departure tax
<b>Freight Rail</b>	Light Density Rail Line Pilot Projects Federal Railroad Administration Grants (planning, rail service continuation, rehabilitation, provision of substitute service)	General Fund

<b>Mode</b>	<b>Major Federal Programs</b>	<b>Federal Revenue Sources</b>
<b>Passenger Rail</b>	Magnetic Levitation Transportation Technology Deployment High Speed Rail Amtrak	Highway Trust Fund  General Fund General Fund (Relies on specific capital appropriations) Passenger fares Food/beverage revenue
<b>Marine, Commercial Shipping</b>  <b>Ferries</b>	Army Corps of Engineers: Construction, operation, and maintenance of waterways, locks, and harbors  Construction of ferry boats and terminal facilities	Fuel taxes paid by inland water carriers Ad valorem taxes paid by the users of ports  Highway Trust Fund
<b>Bicycle Transportation and Pedestrian Walkways</b>	Surface Transportation, including Enhancements National Highway System Congestion Mitigation and Air Quality Improvement Federal Lands Scenic Byways Recreational Trails	Highway Trust Fund
<b>Pipeline</b>	Pipeline Safety Fund	User fees assessed on a per-mile basis on each pipeline operator

### 3. Federal-aid Programs by Mode

For purposes of statewide planning, the federal programs supporting highways and public transportation are the most critical federal funding sources. More recently, passenger rail has become more important as a mode that is considered as part of multimodal planning to alleviate congestion on highways and at airports. The programs supporting these modes are described in more detail in the following.

#### a. Major Federal-aid Highway Programs

The Federal-aid Highway Programs are administered by the Federal Highway Administration as grant-in-aid programs. The programs distribute federal funds to the states based on formulas that take into account factors such as population, area, mileage, relative costs or needs, and the state's contribution to the Highway Trust Fund. Unlike previous legislation, TEA-21 guarantees that at least 90.5 percent of the state's percentage contribution to the highway account of the

Highway Trust Fund will be returned in the form of grants. States and local jurisdictions generally must provide a 20 percent match to receive funds from these programs. For interstate maintenance the local match is ten percent. The Federal-aid Highway Programs are supported by the Highway Trust Fund. It receives user fees in the form of federal motor fuel and other excise taxes. In 1996, the highway account of the Trust Fund received \$22 billion in revenues dedicated to highways. Current taxes and taxation levels supporting the Trust Fund are presented in the Appendix.

The following are the major federal-aid highway programs providing grants under TEA-21:

#### Exhibit V-4: Major Federal-Aid Highway Programs under TEA-21

Program	Eligible Uses	Distribution Mechanism	Federal Share of Funded Projects
<b>Surface Transportation (STP)</b>	Broad range of surface transportation capital needs, including many roads, transit, sea- and airport access, vanpool, bike, and pedestrian facilities	25% based on total lane miles of federal-aid highways in state as % of total federal-aid highway lane miles in all states  40% based on VMT on federal-aid highways in state as % of total VMT on all federal-aid highways  35% based on estimated tax payments from highway users in the state to the Highway Account of the Highway Trust Fund as % of total payments of all states	80%
<b>National Highway System (NHS)</b>	Interstate routes, major urban and rural arterials, connectors to major intermodal facilities, national defense network	25% based on lane miles of principal arterials (excluding Interstate) in state as % of all principal arterial lane miles  35% based on VMT on principal arterials (excluding the interstate system) as % of VMT on all principal arterials  10% based on lane miles of principal arterials divided by total population as % of this ratio for all states  30% based on diesel fuel used in state as % of all diesel fuel used	80%

<b>Program</b>	<b>Eligible Uses</b>	<b>Distribution Mechanism</b>	<b>Federal Share of Funded Projects</b>
<b>Interstate Maintenance</b>	Resurfacing, restoring, and rehabilitating routes on the interstate highway system, but no new capacity except HOV or auxiliary lanes in nonattainment areas	33.33% based on total Interstate lane miles as % of all Interstate lane miles  33.33% based on VMT traveled on Interstates in state as % of all VMT on all Interstates  33.33% based on state contribution to Highway Account attributable to commercial vehicles as % of all contributions attributable to commercial vehicles	90% (80% for added capacity in attainment areas)
<b>Bridge Replacement and Rehabilitation</b>	Replacement and rehabilitation of any public bridge	Relative share of total cost to repair or replace deficient bridges	80%
<b>Congestion Mitigation and Air Quality Improvement Program (CMAQ)</b>	Projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide (CO), and small particulate matter (PM-10) which reduce transportation related emissions.	100% based on weighted nonattainment and maintenance area population.	80%
<b>Minimum Guarantee</b>	Provides funding to States based on equity considerations. These include specific shares of overall program funds and a minimum return on contributions to the Highway Account of the Highway Trust Fund.	The percentage shares are adjusted each year to ensure that each State's share of apportionments for the specified programs is at least 90.5 percent of its percentage contributions to the Highway Account based on the latest data available at the time of the apportionment.	80%

Source: U.S. DOT/FHWA, TEA-21 Summary and Fact Sheets, 1998.

Most of these funds are distributed to state departments of transportation. However, since 1991 some funds from the STP and the Congestion Management and Air Quality Improvement Program can be used only in large metropolitan planning organizations serving areas with populations of 200,000 or more and designated transportation management areas. State projects are eligible for these funds. However, they must compete based on the selection criteria developed by the metropolitan planning organization. The funds programmed for these and other highway programs under TEA-21 are listed in the Appendix. Based on current revenue projections, FHWA expects to distribute \$175 billion in highway program funds during the duration of TEA-21.



## b. Federal Transit Administration Programs

Other major sources of surface transportation funds are the programs administered by the Federal Transit Administration (FTA). These funds come from the Mass Transit Account of the Highway Trust Fund, which is supported by federal motor fuel tax revenues and General Fund appropriations. Current programs are listed in Exhibit V-5 on the following page.

### Exhibit V-5: Principal FTA Programs

Program <sup>1</sup>	Eligible Uses	Distribution Mechanism Based on	Federal Share of Funded Projects and Services
Urbanized Areas (91.23%): (Section 3007) 50,000 – 200,000  Over 200,000	Capital and operating expenditures  Capital and preventive maintenance, 1% must go to transit enhancements	Population and population density  Population, population density, and transit data	80%, 90% for incremental costs of vehicle-related equipment to comply with CAAA and ADA
Other than Urbanized Areas (6.37%): (Section 3014)	Capital and operating expenditures in non-urbanized areas (under 50,000)	Formula based on rural populations in all states	80%, 90% for incremental costs of vehicle-related equipment to comply with CAAA and ADA
Special Needs of the Elderly and Individuals with Disabilities (2.4%): (Section 3013)	Capital assistance to organizations providing specialized services for the elderly and disabled	Fixed minimum for each state and formula based on population of elderly and disabled individuals	80%, 90% for incremental costs of vehicle-related equipment to comply with CAAA and ADA
Clean Fuels (Set-aside before allocation to areas) (Section 3008)	Purchase, lease of clean fuel buses and facilities; improvements to existing facilities to accommodate clean fuel vehicles	Nationwide among eligible applications based on non-attainment rating, number of buses, and bus passenger-miles	80%
Rural Transportation Accessibility (Set-aside before allocation to areas) (Section 3038)	Incremental capital and training costs related to ADA compliance for over-the-road bus service. Applies to intercity fixed route, local fixed route, commuter, charter, tour service.	Nationwide among eligible applications based on identified need for service, early acquisition of equipment, financial capacity, service impacts	50% of costs related to ADA compliance

Program <sup>1</sup>	Eligible Uses	Distribution Mechanism Based on	Federal Share of Funded Projects and Services
Discretionary			
Capital Investment Grants and Loans <i>(Section 3009)</i>	New starts or extensions to existing fixed guideway systems (40%)  Fixed guideway modernization (40%)  Bus and related facilities (20%)	Discretionary  Formula distribution to urbanized areas in 7 tiers  Discretionary	80%, 90% for incremental costs of vehicle-related equipment to comply with CAAA and ADA
Job Access and Reverse Commute Grants <i>(Section 3037)</i>	Capital and operating costs of job access transportation services  Promotion of special services, programs	Discretionary based on:  Percent of population on welfare  Need for additional services  Coordination with existing providers and welfare agencies  Use of innovative approaches, existence of regional plan and long term funding strategies	50%

<sup>1</sup> Formula (%=Percentage of total formula program funds allocated to specific program)

Source: FHWA, TEA-21 Summary, Fact Sheets, 1998.

While these programs are part of the support that the federal government provides to states, the funds for large urban public transportation systems and fixed guideway projects are distributed directly to the transit systems. The state distributes federal funds to eligible small urban, rural, and disabled and elderly programs based on formula. Funds available from the FTA programs under TEA-21 are presented in the Appendix. A total of \$42 billion has been authorized for transit under TEA-21.

### c. Federal Rail Programs

TEA-21 continues to provide funding for existing rail programs and implements several new programs. Exhibit V-6 lists these programs.

**Exhibit V-6: Rail Programs under TEA-21**

<b>Program</b>	<b>Eligible Uses</b>	<b>Distribution Mechanism</b>	<b>Federal Share of Funded Projects and Services</b>
High Speed Rail Development	Corridor planning Technology improvements	Discretionary on a national basis	50% planning, 100% technology improvements
Magnetic Levitation Transportation Technology and Deployment	Preconstruction planning Final design, engineering, and construction Research and development of low-speed magnetic levitation technology	Discretionary on a national basis, criteria include: <ul style="list-style-type: none"> <li>— National importance</li> <li>— Contribution to congestion mitigation</li> <li>— Non-federal financial support</li> <li>— Job creation, others</li> </ul>	No matching requirement, although program cannot fund more than 2/3 of full project costs STP and CMAQ can also be used by state
Light Density Rail Line Pilot Projects	Capital improvements and rehabilitation of public and private rail lines (in states with a rail plan)	Discretionary on a national basis, must include contributions by owner if private rail line	No matching requirement, other than private participation on privately owned lines
Alaska Railroad	Capital improvements and rehabilitation of rail passenger operations of state-owned railroad	Discretionary on a national basis, must be appropriated by Congress	No matching requirement

Source: FHWA, TEA-21 Summary, Fact Sheets, 1998.

**4. Funding Flexibility**

As the descriptions of different federal-aid programs above indicate, there are differences in the types of transportation facilities and services that these programs can support. To provide states with opportunities to develop multimodal transportation programs, ISTEA gave states unprecedented flexibility in the use of these funds. TEA-21 further expands the ability of states to transfer funds among programs according to state priorities. With these options, TEA-21 gives states the flexibility to fund important projects without regard to mode. Exhibit V-7 presents the transferability guidelines given by TEA-21.

## Exhibit V-7: Funding Transferability Under TEA-21

Program	Transferability
<b>National Highway System (NHS)</b>	<p>Up to 50 percent of NHS apportionments may be transferred to Interstate Maintenance (IM), Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ) and/or the Bridge Replacement and Rehabilitation Program.</p> <p>Up to 100 percent of NHS apportionments may be transferred to STP, if approved by the Secretary and if sufficient notice and opportunity for public comment is given.</p>
<b>Interstate Maintenance</b>	<p>Up to 50 percent of Interstate Maintenance apportionments may be transferred to NHS, STP, CMAQ and/or the Bridge Replacement and Rehabilitation Program.</p>
<b>Bridge Replacement and Rehabilitation Program</b>	<p>Up to 50 percent of Bridge Program apportionments may be transferred to IM, NHS, STP, and/or CMAQ.</p> <p>For purposes of apportioning Bridge Program funds, the transferred amount will be deducted from the total cost of deficient bridges in the State and in all States.</p> <p>Funds set aside for bridges not on Federal-aid highways (off-system bridges) may not be transferred unless a determination is made that the State has inadequate needs to justify expenditure of the full amount of the setaside funds.</p>
<b>Congestion Mitigation and Air Quality Improvement Program</b>	<p>Up to 50 percent of the amount by which the CMAQ apportionment for the fiscal year exceeds the amount that would have been apportioned for that fiscal year if the CMAQ program had been funded at \$1.35 billion annually may be transferred to STP, NHS, IM, and/or the Bridge Program.</p> <p>Transferred funds may only be used in nonattainment and maintenance areas.</p>
<b>Surface Transportation Program</b>	<p>Transportation Enhancement (TE) setaside - Up to 25 percent of the difference between the amount set aside for TE for the fiscal year and the amount set aside for TE for FY 1997 may be transferred to IM, CMAQ, NHS and/or the Bridge Program.</p> <p>Safety setaside - Safety setaside funds equivalent to the funds made available for FY 1991 for the Hazard Elimination and Railway-Highway Crossing Programs (23 USC 130 and 152) may not be transferred. Up to 25 percent of the difference between the remainder of the safety setaside for the fiscal year—the "optional safety" funds—and the comparable amount for FY 1997 may be transferred to IM, CMAQ, NHS and/or the Bridge Program.</p> <p>Suballocation to areas - STP funds allocated to sub-State areas (rural, urbanized areas with population over 200,000) may not be transferred.</p> <p>Transfers to STP from the IM, NHS, CMAQ, and Bridge Programs will not be subject to further STP setasides or suballocations.</p>
<b>Interstate Construction (IC)</b>	<p>A State, other than Massachusetts, may transfer an amount equivalent to the Federal share of the cost to complete its open-to-traffic Interstate segments</p>

Program	Transferability
	<p>included in the latest Interstate Cost Estimate (ICE) from its IC funds to NHS and/or IM. The work on which the transfer is based will be removed from the ICE and will lose its IC fund eligibility.</p> <p>States may transfer IC funds remaining after all work included in the ICE has been fully financed to the NHS.</p> <p>States with remaining completion work on Interstate gaps or open-to-traffic segments may relinquish IC fund eligibility and transfer to the NHS amounts equivalent to the Federal share of the cost of such work in the most recent ICE.</p>

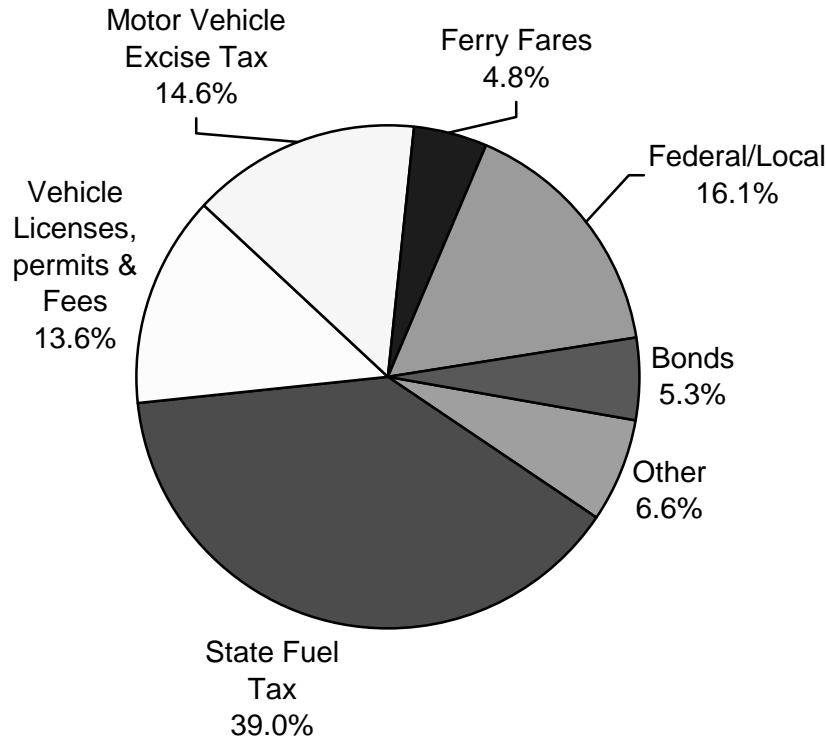
### C. Funding at the State Level

The bulk of funding for transportation at the state level, as at the federal level, comes from user fees. For states, the largest single funding source is the motor fuel tax, followed by motor vehicle taxes in the form of excise taxes or registration fees. Other funding sources include the general fund, bonds, and in some states, tolls. In general, user fees like the motor fuel tax are dedicated (sometimes constitutionally) to the mode from which they are collected and cannot be used for other modes, although there are some exceptions. Thus, the majority of state transportation revenues support highways.

States play a significant role in funding highways and, in some states, transit facilities and services. Transit funding at the state level comes from a variety of different sources, including the general fund, sales taxes, fuel taxes, and a variety of other sources. State revenues for rail, marine, and air transportation are limited in most states, making it difficult to fund these modes at the state level. Therefore, some states have implemented multimodal transportation funds in recent years. These multimodal funds are often supported by new revenue sources or a portion of highway user fees without a constitutional limitation on its use. In many states, this is the case with motor vehicle excise taxes.

Exhibit V-8 shows the shares of different funding sources for the 1997-1999 biennium for Washington State. Washington has a fairly typical transportation revenue structure. The motor fuel tax is the largest transportation revenue source, providing 39 percent of \$3.6 billion in revenue. It can be used only for highways because of a constitutional limitation. Washington uses bonds to support highway and ferry infrastructure, but does not currently have any toll facilities. For transit and intercity passenger rail, funding at the state level comes from portions of the motor vehicle excise tax. The state also allows local jurisdictions to impose local sales taxes to support transit. State funding for other modes, with the exception of ferries, which are considered part of the highway system, is limited. Exhibit V-9 lists all funding sources available to the state.

**Exhibit V-8: Washington State's 1997-1999 Funding Sources**



Source: Washington State Legislative Transportation Committee, Transportation Resource Manual, 1998.

**Exhibit V-9: Washington State Funding Programs and Revenue Sources for Transportation Infrastructure and Services**

Mode	State Program	State Funding Source
<b>Highways</b>	Transportation Fund: Highway Fund	Motor fuel tax Motor vehicle registration fees Motor vehicle excise tax Licensing fees Bond issue proceeds
<b>Public Transportation</b>	Transportation Fund: Central Puget Sound Public Transportation Account High Capacity Trans. Account Public Systems Trans. Account	Portion of motor vehicle excise tax Voter-approved local sales tax or portion of motor vehicle excise tax Fare box revenues

<b>Mode</b>	<b>State Program</b>	<b>State Funding Source</b>
<b>Aviation</b>	Aeronautics Account	Aviation fuel tax Transfer from motor fuel tax (.028% of gross less sales tax) Aircraft registration fee Aircraft excise tax Pilot registration fee Miscellaneous
<b>Passenger Rail</b>	Intercity Passenger Rail Account	Motor vehicle excise tax Farebox revenues
<b>Freight Rail</b>	Essential Rail Assistance (Low interest loan program to preserve existing low density lines and service)	General Fund bond proceeds Donations Loan repayments Treasurer's deposit income
	Essential Rail Banking (Low interest loan to purchase rail corridors)	General Fund bond proceeds Donations Loan repayments
<b>Marine Commercial Shipping Ferries</b>		No source at the state level Motor fuel tax (6.36%) Motor vehicle excise tax (12.22% of 2.0% of base rate) Bond proceeds Motor vehicle registration fee (\$2.02 per new registration, \$.93 per renewal) Combined licensing fee (1.611% of collections) Ferry fares, concessions, and rent
<b>Bicycle and Pedestrian</b>		Motor fuel tax (0.1% at state level)

Source: Washington State Legislative Transportation Committee, Transportation Resource Manual, 1997.

## **D. Funding at the Local Level**

Local funds are an important component of the resources available for transportation infrastructure and services. Unlike the federal and state governments, however, local governments typically do not depend to a high degree on user fees to generate revenue. They use property and sales taxes that have been deposited into the general fund as well as a variety of other funding sources to support transportation infrastructure.

Local funding is of particular importance with regard to transit and commuter rail, airports, and seaports. These facilities, while not under state control, are often an important part of the statewide transportation system, and their financial support should be considered in the statewide planning effort. This is critical even if the state does not fund these facilities directly.

Many local jurisdictions pay for transportation facilities and services with general fund revenues or local option taxes to support social or economic development goals. The ability of local jurisdictions to levy such taxes varies widely between states. The state considers the provision of local option taxes as part of its overall transportation finance strategy—they allow counties and cities to fund the parts of the statewide transportation system for which they are responsible. In addition, there are federal funding sources, often administered by the state, and state funding sources that are available to local jurisdictions.

## **E. Traditional Private Sector Funding**

Private sector funding for facilities and equipment has historically been very important for some modes. Railroad tracks in the United States are owned by private rail companies, as is most freight rail equipment. Private companies also own airports, seaports, bridges, pipelines, telecommunications facilities, passenger and cargo planes, and ships. State departments of transportation do not have control over these facilities or equipment, nor over the funds supporting them.

However, since ISTEA, many states have begun to communicate with these private transportation providers. TEA-21 further strengthens these relationships by specifically requiring that states include freight shippers in the statewide planning process. There is also increased coordination of planning and investment activities. These efforts can help in the development of a coordinated multimodal transportation system even if public expenditures are minimal. They can also help ensure that public and private investment are better synchronized to increase the effectiveness of the system as a whole.



## VI. Determining Funding from New or Nontraditional Sources



Since the 1980s, state governments have been forced to look for new and nontraditional sources of funding for transportation infrastructure. The reasons for this development lie in increased travel, increased citizen expectations, stronger competition for funds among diverse interests, and pressure towards a leaner government and more private involvement in the provision of transportation infrastructure. They are also due in part to a decrease in the share of federal funding for transportation infrastructure, in particular highways.

The federal government is addressing this issue with the passage of ISTEA, subsequent legislation, and the recent TEA-21. Through this legislation, the federal government has introduced new mechanisms designed to leverage federal funds and attract private capital. In recent years, state and local governments have also evaluated new approaches to user fees to increase transportation revenues. The following discusses mechanisms at both the federal and the state level. It also includes a section on public-private partnerships.

### A. New and Innovative Approaches in Funding Federal-Aid Projects

Until the 1990s, the federal government took a strictly programmatic approach to transportation funding. Periodic authorization bills served to apportion and distribute funds among states in the form of grants that reimbursed states for transportation expenditures. As the description of federal programs above illustrates, federal assistance to states today is still provided mostly through grant programs that reimburse states for transportation infrastructure expenditures.

Since implementation of ISTEA in 1991, however, both FHWA and FTA have provided states with the opportunity to use federal funds in ways that were previously not feasible. ISTEA and subsequent federal transportation legislation introduced new funding mechanisms, like flexible match, credit assistance, and revolving funds. The goal of these federal efforts is to assist states in improving their ability to solicit funds for transportation projects. These new funding approaches, commonly referred to as “innovative finance”, were designed to allow states to accelerate project schedules and increase leverage from federal funding. They also are intended to attract private capital for transportation infrastructure.

Recent years have brought an exciting range of projects that would have been built much later—or not built at all—without these changes in federal philosophy. There has also been a lively discussion about the ability of these approaches to accelerate and leverage

additional investment in transportation infrastructure. Experience so far has shown that these approaches can indeed help advance individual projects. However, analysts also indicate that there is room for improving their ability to leverage private investment and stretch federal dollars. In the coming years, the discussion on appropriate and successful tools to leverage federal funds and related regulatory and budgetary changes is sure to continue. The following lists the most critical opportunities provided under TEA-21 and previous legislation by the federal government. There are four different types of tools available:

- Cash Flow
- Leveraging
- Credit
- Tolls and Other Income

Each of these tool types is outlined below.

## **1. Cash Flow Tools**

In addition to the ability to transfer funds among highway programs, TEA-21 also allows states to use federal funding in a variety of different ways that were previously not possible. While this does not increase the amount of federal funding, it makes it easier for states to manage their cash flow and to program projects according to priority rather than funding availability. It also allows states to structure their programs so that state and local funds can be freed for projects that do not need to be built to federal design standards.

Cash flow tools allow states to apply for construction funds even after the authorization period, giving states more flexibility to advance projects that have a long lead-time with anticipated rather than current funds. New provisions further allow states to vary the non-federal share over the project period as long as the required matching share is provided over the lifetime of the project. With the implementation of the Grant Anticipation Revenue Vehicle (GARVEE), states can now issue notes or bonds to fund eligible projects before federal funding is available. In addition, states can count certain types of federal funds as state match for specific types of projects. Exhibit VI-1 lists the available matching share options.

**Exhibit VI-1: Cash Flow Tools**

<b>Cash Flow Tool</b>	<b>Approach</b>
Advance construction	Allows states to independently raise up-front capital required for a project and preserve eligibility for future federal funding for the project. Projects must be designated as advance construction projects to be eligible.
Partial conversion of advance construction	Form of advance construction: State only converts, obligates, or receives reimbursement for part of its funding for an eligible project in a given year. States no longer have to wait until the full amount of obligation authority is available.
Bond Cost Reimbursement: Grant Anticipation Revenue Vehicle (GARVEE)	State-issued short-term note or long-term bond that uses future federal funds to support payment of principal and interest. Issuance and insurance costs are also eligible. This is generally used in combination with advance construction.
Tapered (Variable) Match	Allows non-federal share to vary over project life, so long as the ultimate matching share is preserved over time.
Program Level	For STP projects, allows federal share for funds to be matched across the full program, not on a project-by-project basis.
Flexible: Federal Land Management Agency Funds	Funds from other federal agencies may count toward the non-federal matching share for recreational trails and transportation enhancement projects.
Flexible: Federal Lands Highway Program	Funds from a department of transportation's Federal Lands Highway Program may count towards non-federal match for projects within or providing access to federal or Indian lands.
Flexible: Publicly-Owned Land	Permits donations of publicly-owned property to count towards non-federal match on all federal-aid highway projects.

Source: FHWA, Innovative Finance Quarterly, Vol.4, No. 3, Summer 1998.

In addition to these matching opportunities, TEA-21 allows states to charge proportionate costs of a broader range of administrative and overhead activities to federally funded projects. This allows states to limit the number of federally funded projects with relatively high and costly design standards, and frees state funds for other, less complex projects. Exhibit VI-2 provides an example of different strategies using the GARVEE approach.

**Exhibit VI-2: Variations in GARVEE Bond Strategies**

	<b>Massachusetts: Central Artery/Tunnel</b>	<b>New Mexico: Corridor 44</b>	<b>Ohio: Spring-Sandusky Interchange</b>
<b>Project</b>	An elevated portion of Interstate 93, known as the Central Artery in downtown Boston, is being reconstructed primarily as a tunnel. In addition, Interstate 90 is being extended to Boston's Logan Airport via a new tunnel under Boston Harbor. The project is expected to be finished in 2004.	Corridor 44 is a 140-mile, two-lane principal arterial extending between Bernalillo and Bloomfield in the northwest corner of the state. The New Mexico State Highway and Transportation Department will acquire the necessary right-of-way and contract with a private developer to design and manage construction associated with expanding the highway from two to four lanes, and provide a long-term warranty for preventive maintenance activities. Construction is expected to be complete in 2001.	The Spring-Sandusky project will improve connections and traffic flow in downtown Columbus through relocation of U.S. route 33; new construction of Interstate 670 and State Route 315; and related paving, grading, and drainage work. The project is expected to be complete in 2002.
<b>Cost</b>	\$10.8 billion	\$295 million	\$116 million
<b>Debt</b>	The Commonwealth of Massachusetts issued \$600 million of Grant Anticipation Notes (GANs) in June 1998, with authority from the legislature to issue up to \$1.5 billion in total. The \$600 million issue matures in eight to 17 years. The Commonwealth intends to pay interest from state highway funds but retire principal with federal-aid reimbursements.  Debt service payments will address interest only until calendar year 2005, at which point the Commonwealth will start repaying principal. From 2005 forward, average annual debt service on the first \$600 million issued will be approximately \$60 million. By comparison Massachusetts' average annual federal-aid highway apportionments throughout the life of TEA-21 are expected to be approximately \$524 million.	The New Mexico Finance Authority expects to issue approximately \$287 million of bonds in four series beginning in July 1998. The bonds will amortize over 15 years, with final maturity in 2015. The debt will be insured but has not yet received ratings. Average annual debt service will be approximately \$28 million. By comparison, New Mexico's average annual highway apportionments throughout TEA-21 are expected to be about \$256 million.	The State of Ohio issued \$70 million worth of bonds in May 1998. The bonds will mature in ten years. Average annual debt service will be slightly less than \$9 million. By comparison, Ohio's average annual highway apportionments throughout TEA-21 are expected to be about \$887 million.
<b>Source of Debt Reimbursement</b>	Indirect: Federal funds reimburse expenditures on other federal-aid projects; the department of transportation then uses some of these funds for debt service on the debt financed project.	Direct: Federal funds dedicated to the specific project directly support debt service paid to investors on the federal-aid project.	Formula (%=Percentage of total formula program funds allocated to specific program)
<b>Alternative Funding Sources Backing Loan</b>	Internal: Ten cents of 21-cent state fuel tax can be used under specified constrained conditions.	External: If cost-effective, bond insurance can be purchased.	Internal: — All eligible federal-aid highway funds. — State infrastructure bank bond fund. — Other grants or state highway funds.
<b>Implementation</b>	Federal funds automatically flow into a GAN Trust Fund and are available without legislative action. Alternative sources, however, are subject to appropriation.	Federal funds are automatically available; no legislative action is needed.	Biennial appropriations by the General Assembly.

Source: FHWA: Innovative Finance Quarterly; Federal Highway Funds and Debt Finance, Vol. 4, No. 3, Summer 1998, pages 1-4.

## 2. Leveraging Tools

ISTEA and subsequent federal legislation have also contained a number of provisions designed to leverage funds, particularly those from private sources, to increase the impact of federal funds. This includes giving states the ability to secure bonds with FHWA and, to some extent, FTA funds, to provide better access to capital markets. Further opportunities lie in the increased federal share (80 percent) that can now be applied to toll projects and the option to loan federal funds to any project with a dedicated revenue stream rather than limiting it to those projects that will pay funds back with toll proceeds. Exhibit VI-3 provides an overview of these tools.

### Exhibit VI-3: Leveraging Tools

Tool	Approach
Flexible match	Allows states to apply private donations of materials, labor, or assets and private funds towards the state or local match for federal-aid projects.
Federal share on toll projects	Expanded use of federal funds for toll projects to include construction of new facilities, resurfacing, restoration, and rehabilitation of existing facilities and conversion of free facilities. Private facilities are now also eligible.
Bonds and debt instrument financing	Allows states to use federal funds for bond principal, interest costs, issuance costs, and insurance on eligible projects.
ISTEA Section 1012 loans	Removes the limitation that federal funds can be used only once. Allows states to loan federal funds to leverage any eligible investment; the state can use the funds again once they have been paid back.
ISTEA Section 1044 toll investment credits	Allows states to receive investment credit for certain toll revenue expenditures, which can be applied towards the nonfederal matching share of all ISTEA programs.

## 3. Credit Tools

In addition to the ability to structure the flow of federal funds to meet state program needs and to leverage private funds, federal funds can be used as credit tools. Exhibit VI-4 outlines the possible credit arrangements.

**Exhibit VI-4: Credit Tools**

<b>Tool</b>	<b>Approach</b>
State Infrastructure Bank	States could allocate up to ten percent of their ISTEA apportionment to capitalize the state bank. Funds can be used to provide loans for projects. This can be structured as a revolving loan fund, where loans are recycled for new projects.  State infrastructure banks can provide third-party guarantees to projects to ensure that there is sufficient revenue to pay project costs or debt service.
Surface Transportation Credit Program (Transportation Infrastructure Finance and Innovation Act)	This provides direct federal loans, loan guarantees, and lines of credit for large surface transportation projects of national significance.
Rail Credit Pilot	This provides direct federal loans and loan guarantees for rail and intermodal projects.

Source: FHWA, Innovative Finance Quarterly, Vol.4, No. 3, Summer 1998.

**a. State Infrastructure Bank**

Infrastructure banks or revolving loan funds have long been a useful and worthwhile approach to funding water, sewer, and other public infrastructure facilities. However, until recently only very limited amounts have been available to fund transportation projects. A policy change at the federal level allowed states for the first time to use ISTEA funds as seed money for implementing such banks for transportation at the state level. FHWA has accepted the proposals of 35 states and Puerto Rico to develop infrastructure banking mechanisms for transportation infrastructure. State bond banks can provide credit enhancement in the form of bond or loan guaranties, letters of credit, debt service reserves, or bond or loan insurance. They also allow for the issuance of pooled bonds; assisting small projects; providing lower cost financing packages; and helping small, rural, and disadvantaged communities gain access to credit markets.

The state infrastructure banks, created in part with federal seed money from ISTEA program categories like STP or NHS, are to provide a variety of different loan and credit enhancement assistance, and give states and local governments greater flexibility in developing funding solutions. They can accelerate projects and enable state and local jurisdictions to implement large projects that would be difficult to fund within the constraints of state and federal programs. Some states, such as Oregon, are also making provisions for the infrastructure bank to function as a bond bank. This is giving state and local agencies the opportunity to borrow funds for smaller projects from which they otherwise may not have been able to borrow. As TEA-21 was enacted, \$293 million in federal funds had been deposited into the banks' highway and transit accounts. The banks had signed loan agreements for 33 projects providing \$346 in loans to support construction

projects valued at \$1.9 billion. State infrastructure bank loans and loan agreements submitted as of June 1, 1998 are provided in the Appendix.

TEA-21 has left the existing state infrastructure bank program in place but does not allow most states to use TEA-21 funds to further capitalize state infrastructure banks. However, a new pilot program provides this opportunity to four states. The pilot program allows California, Florida, Missouri, and Rhode Island to capitalize TEA-21 funds. The program also eases restrictions that were applied under the previous program. TEA-21 removes the ten percent limit on capitalization, and the separate highway and transit accounting requirements. It also broadens project eligibility, and establishes a five-year disbursement schedule.

**b. Transportation Infrastructure Finance and Innovation Act**

TEA-21 also established a new program, the Transportation Infrastructure Finance and Innovation Act (TIFIA), to provide better access to capital markets. The program allows the U.S. Department of Transportation to provide direct credit assistance on flexible terms to public-private sponsors of major transportation projects. A broad range of modal and intermodal projects, including highway, transit, high speed rail, and freight transfer facilities are eligible for funding under this program.

**c. Potential Credit Leverage Ratios**

Recent research indicates that credit mechanisms can indeed be a useful tool in using federal funds to leverage additional funds if compared with the traditional grant program approach. State infrastructure banks can yield more than four times the return received through a standard grant program. For direct federal credit, the return can be 30 times higher than the initial federal investment. Exhibit VI-5 illustrates these differences.

**Exhibit VI-5: Grant Reimbursements, State Infrastructure Banks,  
and Credit Assistance\***

<b>Program</b>	<b>Federal Share of Project Costs</b>	<b>Budget Scoring (cost per dollar of federal assistance)</b>	<b>Effective Cost of Federal Share</b>	<b>Leverage Ratio (capital investment vs. budget impact)</b>
Traditional Federal-aid Grant Reimbursement	\$80.00 **	\$1.00	\$80.00	1.25:1
State Infrastructure Bank	25.00 ***	1.00	25.00	4:1
Direct Federal Credit	33.00 ****	0.10	3.30	30:1

Note: \* Assumes an infrastructure project costing \$100.  
\*\*Will vary from project to project. Based on a 1997 report to Congress.  
\*\*\*Minimum federal share under TIFIA in many cases would be smaller; will vary by project.  
\*\*\*\*Estimated average; will vary by project depending on creditworthiness.

Source: Bryan Grote and David Seltzer, Budget Scoring, Highway Projects, and Innovative Finance, TRB News 198, p. 15-25, September 1998.

**4. Tolls and Other Income-Generating Tools**

TEA-21 also expanded the ability of states to generate revenue that can count as local match for federal funds. The act allows states to toll interstate highways under certain conditions and to use income from right-of-way as local match. Exhibit VI-6 provides an overview of these opportunities.

**Exhibit VI-6: Tolls and Other Income-Generating Tools**

<b>Tolls and Other Income</b>	<b>Approach</b>
Interstate Highways: Conversions to Toll	Up to three Interstate highway segments may be converted from free to toll as part of a reconstruction project.
Right-of-Way Income	This allows income from right-of-way sales and leases to be used for Title 23 purposes, as currently allowed for airspace income.

Source: FHWA, Innovative Finance Quarterly, Vol.4, No. 3, Summer 1998.



## B. New and Innovative State Funding Sources

In addition to the approaches outlined above, states have also begun to look at alternatives to traditional taxes and fees to support transportation infrastructure and services. To provide a look at the efforts of one state, Exhibit VI-7 illustrates the efforts of Texas' Finance Issue Committee in developing an initial listing of potential funding sources. The Committee later revised and narrowed this initial list according to priorities and the potential for implementation.

**Exhibit VI-7: New or Revised Funding Sources for Texas**

Mode	Funding Level	Variations on Existing Funding Sources	New or Potential Funding Sources
<b>Highways</b>	State	Variable motor fuel taxes Dedicated automobile sales taxes Weight-distance taxes Dedicated sales tax on tires and accessories Alternative vehicle registration fees Tolls Public/private partnerships	Emission fees Land banking and leasing VMT taxes Congestion pricing Personal property tax on vehicles
	Local	Local motor fuel taxes Dedicated automobile sales taxes	Parking, car rental taxes Lodging or bed taxes Regional sales taxes Head or commuter taxes State bond bank Road utility – street user fee
<b>Public Transportation</b>	Federal	STP	Portion of NHS, Interstate, Bridge Funds if moved to Surface Trans. Program
	State	Statewide dedicated sales tax	General taxes
	Local	Modified local sales tax	Debt financing secured by federal funds
<b>Bicycle and Pedestrian</b>	State		Bicycle registration fees Dedicated sales tax on bicycles, tires, parts, and accessories
	Local		Local bicycle registration fee
<b>Passenger Rail</b>	Federal		Emergency Corridor Program (if established)
<b>Freight Rail</b>	State		Public/private partnerships

Source: Texas Department of Transportation, The Texas Transportation Plan, Finance Committee Working Papers, 1994.

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The approaches that have been most widely discussed by state departments of transportation because of their revenue generation potential are outlined below.

### **1. Variable Rate Motor Fuel Taxes**

One of the limitations of traditional motor fuel taxes is that they provide no elasticity – being fixed at a cents per gallon rate, they do not respond to inflation. Variable rate motor fuel taxes could be set as a percentage of the price of the fuel, with a base line below which they could not fall to ensure some predictability. Another option would be to tie fuel tax increases to the construction or consumer price index to account for inflation. The widespread adoption of electronic control systems for fuel dispensing pumps makes this option more feasible today than it has been in previous years. Florida is a leader in variable motor fuel taxes and adjusts its tax rate annually to account for inflation. About ten states have variable rate fuel taxes today.

### **2. Weight Mileage Taxes**

Trucks with high axle weights impose high maintenance costs on highways and bridges. The damage is dependent on both the number of miles driven and the weight on individual axles of the truck and its trailer. This funding mechanism, based on cost allocation studies, would combine both factors in a single payment scheme and increase cost responsibility for this user group. It requires periodic cost-responsibility studies to ensure a close relationship between the fee and the costs that this user group imposes on the system. Although weight mileage fees are used by a number of states in the country, they are not yet common. Oregon is a leader in using this pricing mechanism and receives over 20 percent of its highway revenues from this funding source.

Disadvantages of weight mileage taxes are high administrative costs and the burden on the trucking industry, which must maintain records that allow for accurate taxation. These considerations have kept most states from implementing these taxes. Recent and current advancements in automated vehicle identification technology, however, are making this funding mechanism more practical than it has been in the past.

### **3. VMT, Congestion Fees and Emission Fees**

Vehicle Miles Traveled (VMT), congestion fees and emission fees are market-based strategies designed to provide funding for transportation improvements. The goal of these strategies, referred to as value pricing strategies, is to better tie user fees to actual usage of transportation facilities, and to internalize some of the external costs of travel into actual user costs. While the transportation planning community has been

interested in these pricing mechanisms because they better reflect the actual costs of travel than existing user fees, they have not met with success in the policy arena.\*

One successful project is California's new public-private partnership project, SR-91, in which tolls vary based on the time of travel and congestion levels. Air quality problems have generated proposals for emission fees in California. Another potential approach would charge an annual or biannual emission fee based on the emission characteristics of vehicles. An estimate suggests that annual emission fees per vehicle, calculated based on health and damage estimates, might range from \$5 to \$1,000, with an average of \$125. To date, no proposal has been implemented. As with weight mileage taxes, innovation in the intelligent transportation systems technologies may make some of these techniques more feasible in the future.

## C. Public-Private Partnerships

In recent years, interest in private sector involvement in the finance of publicly owned transportation infrastructure has increased dramatically. There are also many new initiatives in which public and private sector partners work together to fund intermodal facilities like rail-truck transfer facilities or park-and-ride lots that include the development of child care, banking, and other amenities. Changes to limitations on the use of federal funds contained in ISTEA have improved the chances for these new partnerships.

Public-private development of transportation facilities involves the collaboration of a public sponsor and a private partner to finance, construct, and operate a new transportation facility: a toll road, bridge, tunnel, or other facility. Public-private projects now can use a mix of federal, state, local, and private funds. To be viable, these projects must provide returns to private investors that are commensurate with the investment and risk factors. There are a number of different models for structuring a public-private partnership with varying levels of private involvement. The most common models include:

**Build-Own-Operate:** A private consortium finances and builds a facility, then owns, operates, and collects revenues on the facility for an unlimited time. The Ambassador Bridge at the U.S.-Canada border is an example.

**Build-Operate-Transfer:** A private consortium receives a concession to finance, build, own, and operate a facility for a limited time period (usually 20 to 40 years), after which the facility is transferred to the sponsoring government agency free of charge. This is the most common model for public-private partnerships in the U.S. and elsewhere.

**Build-Transfer-Operate:** A private consortium finances and builds a facility but transfers ownership immediately to the government when construction is completed. The consortium then leases the facility back and collects revenues for a limited time period (usually 20 to 40

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\* TEA-21 again provides a comparatively moderate amount of funds (\$10 million) to help states interested in implementing the concept defray the costs of a pilot project.

years). At that point, all rights to the facility are transferred to the government. This model is used in California with the intention to limit the tort liability of the consortia.

Developers and state departments of transportation in California, Virginia, Washington, Arizona, and other states have begun developing these partnerships for highway and other projects. While some projects, like SR 91 in California have been implemented successfully, state departments of transportation have often found it difficult to implement such projects. Public opposition to individual projects (like in Washington where citizens resisted tolls) has forced the elimination of many of these projects. In other cases, like the high speed rail initiative in Texas, funding problems have canceled projects. These early experiences have shown that proper design of such programs, including a well designed public involvement process, is critical to their success. While these initiatives cannot provide all needed transportation infrastructure, they can provide funding for urgently needed projects that would be difficult to fund otherwise within a reasonable time frame.

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## VII. Evaluating Funding Sources



This section illustrates the processes used to evaluate existing funding sources and to determine the potential for additional resources from both existing and new funding sources. The evaluation approaches listed here are not all-inclusive, rather, they are to provide an overview of the range of options available.

### A. Funding from Existing Sources

The evaluation of existing funding sources provides a point of departure or “bottom line” for financial planning. By projecting existing funding sources into the future, departments of transportation can determine how much money they will have, at a minimum, to fund needed transportation projects and services that help achieve planning objectives. The approaches to the evaluation of existing funding sources, however, vary from state to state. This is because financial analysts must decide about what assumptions to make with regard to the development of these sources. The following provides an overview of the analytical tools that are used.

#### 1. Federal Funding

In evaluating the future funding levels of existing federal programs, states have taken different approaches. Some states, like Washington, assume that long-term historical trends will continue over time and project revenue from federal funding sources as a straight line based on these trends. Florida is projecting a one percent annual increase for federal funding. Exhibit VII-1 illustrates this trend. Other states, like Texas, are even more conservative in their approach. Texas does not assume any increases in federal funds but holds current funding levels constant for its ten-year forecast.

**Exhibit VII-1: State of Florida 2020 Revenue Forecast (Millions, 1998 \$)**

Major Revenue Sources	Time Period										23-Year TOTAL <sup>3</sup> 1998-2020	
	1998-02 <sup>2</sup>		2003-05		2006-10		2011-15		2016-20			
Federal <sup>1</sup>	6,546	38%	2,686	31%	4,070	28%	3,630	23%	3,236	21%	20,168	28%
State	9,115	53%	5,095	60%	8,947	61%	9,717	63%	10,470	68%	43,344	61%
Turnpike	1,496	9%	768	9%	1,588	11%	2,118	14%	1,790	11%	7,760	11%
Total <sup>3</sup>	17,157		8,549		14,605		15,466		15,495		71,272	

<sup>1</sup> Federal revenues also include state dollars used to match federal aid.

<sup>2</sup> Based on Adopted Work Program, July 1, 1997. There are relatively more dollars in fiscal years 1998-2002 due to “carry-forwards” of unexpended funds from prior fiscal years and advanced construction projects included in this period.

<sup>3</sup> Columns and rows sometimes do not equal the totals due to rounding.

**2. State Funding**

States also use a trend analysis approach in forecasting future revenues from state funding sources like the motor fuel tax. They usually relate increases to projected increases in VMT, population, and personal income over the planning time frame. In addition, many states also take past increases in the taxes supporting transportation infrastructure into consideration.

Washington State carries out two different types of trend analysis to project available transportation revenues:

**a. Current Law Forecasts**

Washington’s current law forecasts are the most conservative set of forecasts. They are based on the assumption that there will be no new transportation revenue sources or rate increases. Revenues are projected based on forecasts of:

**Fuel consumption**, with the assumption that existing trends towards improved fuel efficiency will continue as older cars are replaced.

**Vehicle registration**, reflecting trends in population growth, towards smaller households, and two income households.

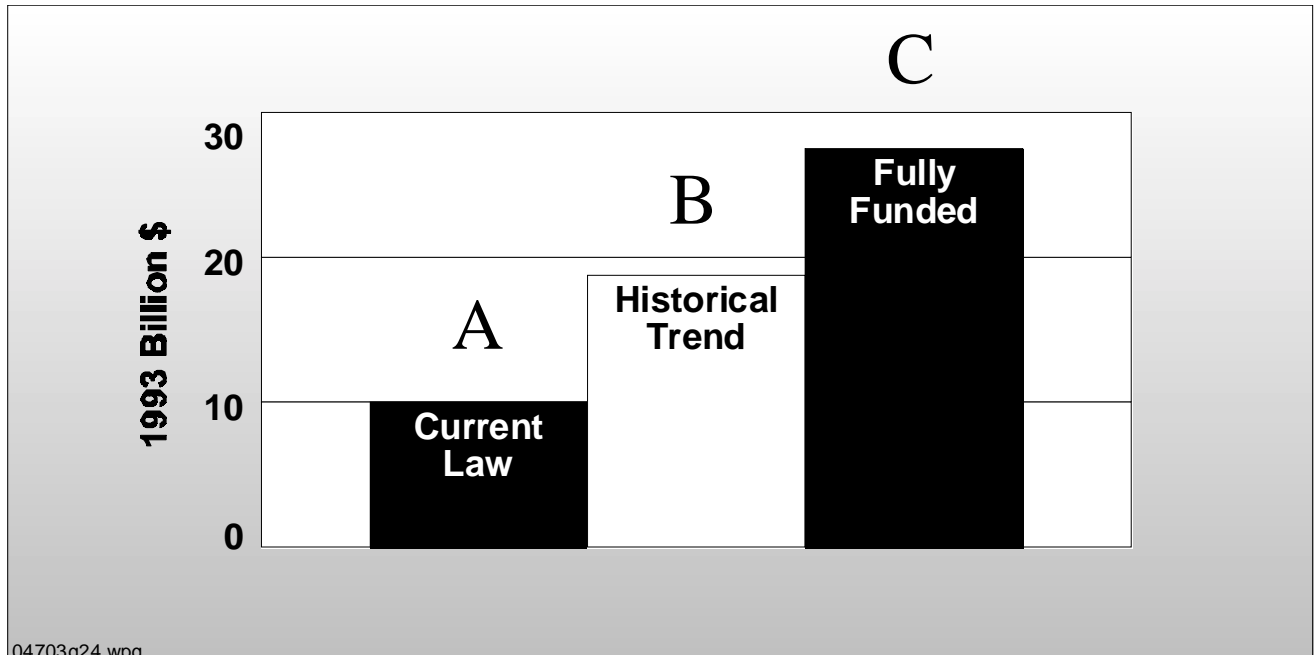
**Bond sales and debt service requirements** are frozen, no new bonds will be sold.

**b. Historical Trend Forecasts**

To develop a forecast of revenues based on historical trends, Washington’s transportation planners looked at the historical relationships between transportation revenues and a variety of different socioeconomic variables. They found that over the last 25 years, there was a very close relationship between personal income and expenditures for transportation. Long term personal income trends were developed based on historic annual growth in per capita income and population forecasts. Planners then proceeded to forecast long-term transportation revenues based on these trends. Exhibit VII-2 illustrates the results of this process. It shows the expected revenue based on the assumption that there are no changes in statutorily set fees and taxes, projected revenues based on historic trend increases, and charts these scenarios against the revenues needed to fully fund the plan.

The most important assumption in using this approach was that the historical relationship between transportation revenues and personal income will remain stable. The forecast will only be accurate if transportation user fees and other sources of transportation revenue will rise to proportionately keep pace with economic growth.

**Exhibit VII-2: Highway System Revenue Scenarios in Washington**



Source: Washington State Department of Transportation; Washington’s Transportation Plan 1997-2016, 1996.

## **B. Determining the Potential for Additional Funding**

The previous section described hands-on approaches to forecast revenues from existing state and federal revenue sources. In addition, a thorough analysis of the opportunities for increasing the levels of funding from existing funding sources and for tapping into new funding sources is an essential component of any financial planning effort.

### **1. Additional Funding from Existing Funding Sources**

This section summarizes the advantages of raising revenue from existing funding sources and describes the evaluation process to determine the potential for increased revenue from these sources.

#### **a. Advantages of Existing Revenue Sources**

Existing funding sources have several big advantages over new funding sources and should therefore be evaluated thoroughly for opportunities to raise the level of revenue that can be gained. These advantages include:

- **Politically acceptable**

The very fact of the existence of current funding sources indicates that they are acceptable to the public. Since the majority is based on some form of user fee, they are also at least to some extent correlated to the use of transportation infrastructure resources.

- **Proven to be legal**

Obviously, if a funding source already exists, chances for a protracted battle about their legality are very small.

- **Additional administrative effort/cost is bound to be minimal**

Since the funding source is already used, the cost to administer any activities required for a higher level of revenue, for example a motor fuel tax increase, is likely to be small.

- **Small increases in user fees supporting these revenue sources can bring substantial revenue increases**

Existing funding sources were, among other reasons, selected because they provide a high ratio of revenue to cost of administration.



## **b. Determining the Additional Potential of Existing Funding Sources**

As indicated earlier, existing funding sources are very effective sources of transportation revenue. They should therefore be reviewed for their potential to provide additional transportation revenue. This can be achieved through the following tools:

- **Using historic data/trends**

Existing revenue sources have been raised in the past. These trends can provide a guideline for future increases, as shown in the example of Washington.

- **Comparison with taxation levels that support the revenue source in other states**

A review of the level of taxation that supports the revenue source, for example the motor fuel tax, in other states can give an indication of what taxation levels might be acceptable to the public.

- **Showing the loss in purchasing power, for example because of more fuel-efficient cars and rising inflation**

Unless they are indexed for inflation and other factors that impact the purchasing power of the revenue source, revenues will decline in value over time. A clear demonstration of the loss in purchasing power can help support the need for increased revenues.

## **2. New or Nontraditional Funding Sources and Techniques**

Before any new or nontraditional revenue sources can be adopted, each potential source must be reviewed for its potential to address transportation needs in an efficient and equitable way. The following provides a listing of criteria that are frequently used in determining the potential of new revenue sources. The list is not all-inclusive but does provide an overview of the issues that should be addressed in the analysis of potential funding sources. Potential criteria include:

- **Financing ability**

This criterion analyses the potential of a revenue source to meet major program and project needs. It is used to distinguish between funding sources that can be applied only to a limited range of projects and those that can fund major programs.

- **Revenue stability**

The more predictable or stable a revenue source is, the higher it would be rated under this criterion. For example, a property tax has a high degree of predictability while toll road revenues are much less predictable.

- **Elasticity**

An important factor in the overall value of a revenue source is its ability to grow with inflation and to take economic growth into account. Revenue sources that increase as the economy grows, e.g. a motor vehicle excise tax that is based on the value of the vehicles in the current fleet, score higher than those that do not.

- **Revenue generation**

Different revenue sources have different abilities to raise new money for transportation. Funding sources that generate a large amount of revenue from a marginal increase of fees to users and/or cost to government are ranked higher than those that do not.

- **Debt/Creditworthiness**

For states that issue bonds, the ability of a revenue source to back debt financing is an important consideration. Mechanisms that are established and accepted in credit markets rate higher than those that are not.

- **Conflict**

Transportation uses may have to compete for the use of some potential revenue sources with other potential uses. Revenue sources that are earmarked for other uses should receive a lower rating than those that are not.

- **Acceptability**

Not all funding sources enjoy the same support from elected officials or the voting public. Sources with proven voter and legislative approval score higher than those that have been rejected in the past or are untried. Here, both experience within a given state and experience in other states should be considered.

- **Ease of administration**

An important measure of the appropriateness of a revenue source or funding mechanism is the relative ease with which it can be implemented. If a mechanism is simple or can be piggy-backed on established sources, it should receive a higher rating than a funding source or mechanism that requires an entirely new system or bureaucracy.

- **Fairness**

Funding sources differ in their impact on different income groups, residents from different parts of the state, and on the generation of users that bears the majority of the costs. Under this criterion, these issues would be considered.

These criteria can be used to evaluate a wide variety of different funding sources for different modes. They address concerns that are important in deciding whether a funding source is appropriate or adequate or whether it will be necessary to look for alternatives. Planners “score” each revenue source based on how well it addresses the criteria and then sum up the scores for all criteria. The revenue sources with the highest combined score can then be looked at more closely. Based on the importance of each criterion, planners sometimes also establish weights for the criteria. For example, the ability of a funding source to provide sufficient funding may be considered more important than the political acceptability of a source for a 20-year planning time frame because the political realities may change over time. Exhibit VII-3 provides a sample evaluation sheet for a list of funding sources for different modes.

In reviewing potential new funding sources, state planners should realize, however, that all “low hanging fruit have been picked.” There are no easy, simple solutions to the existing revenue gap. However, a careful review of potential funding sources can help address pressing problems. For example, public-private funding, which is likely to be applicable only to a limited number of projects in any state, can be useful to fund projects that are needed now but would otherwise be difficult to fund soon.

### Exhibit VII-3: Sample Revenue Evaluation Matrix

Revenue Source ↓		Weighted Score	Raw Score	Finance Ability	Revenue Stability	Elasticity	Revenue Generation	Debt/Credit worthiness	Conflict	Acceptability	Ease of Administration	Fairness
				30	10	10	5	5	10	1	5	10
Highways	Variable motor fuel tax	353	34	5	3	5	5	3	5	3	4	1
	Weight-distance tax	315	32	4	3	2	1	5	5	5	2	5
	Emission fees	267	25	3	3	3	1	2	4	2	2	5
	VMT taxes	281	26	3	3	3	1	4	5	1	1	5
	Congestion pricing	287	27	3	4	3	1	2	5	2	2	5
	Car rental taxes	230	30	1	2	3	4	2	5	5	3	5
Public Transport	Statewide dedicated sale tax	257	24	4	3	5	1	5	0	2	3	1
	Head or commuter tax	170	16	2	3	2	1	3	0	0	2	3
	Part of motor vehicle registration fee	212	22	3	3	3	1	5	0	2	4	1
Bikes & Peds	Bicycle registration fee	168	21	0	2	4	1	1	5	3	1	4
	Dedicated sales tax on bicycles	133	16	1	1	3	1	1	1	3	2	3
	Dedicated sales tax on parts, tires, and accessories	142	15	1	1	3	0	0	1	2	2	5
Passenger Rail	Dedicated sales tax	201	18	3	3	5	1	2	0	1	3	0
	Part of motor vehicle registration fee	180	15	3	3	3	0	4	0	0	2	0

Source: Texas Transportation Plan, Finance Committee Working Papers, 1994.

## VIII. Setting the Stage for the Finance Plan



Why should a statewide planning process address funding issues? After all, federal requirements for a financial component to the long-range planning process are not as stringent as those for metropolitan planning. The answer lies in the fact that at the heart of each planning process lie a number of issues that must be addressed if the overall plan is to be successful. The following outlines the issues which statewide planners must keep in mind throughout the entire planning process to ensure that the plan is feasible. They set the stage for all financial planning efforts.

### A. Understanding the Funding Gap

*Fragile Foundations, A Report on America's Public Works*, published in 1988 by the National Council on Public Works Improvement, demonstrated that public infrastructure, and in particular transportation infrastructure, in the United States is seriously under funded. This has best been documented for highways, still the most important component of the transportation system. While the situation has improved since passage of TEA-21, many transportation planning efforts indicate a significant shortfall in funding to address or meet transportation "needs," be they short-range or long-range. For example, the Institute of Transportation Engineers (ITE) recommendations regarding ISTEA reauthorization, published in spring of 1996, cite a 30 percent gap in the funding available for roads, bridges, and transit capital investment in comparison to what is needed to just maintain current levels of service.

Statewide planners who have gone through the steps outlined in the preceding sections of this document should possess the information required to gain a thorough understanding of the size of any funding gap. To develop a finance plan that addresses the most critical funding needs, planners must determine which modes lack funding and which objectives are most under-funded. This requires careful definition of performance measures and objectives that can help ensure that short-range planning, programming, and budgeting support long-range service objectives and goals. This is particularly important for state departments of transportation that do not engage in the policy processes required to increase revenue for transportation infrastructure and services. It is also critical to ensure that the plan balances multiple interests, as outlined below. Addressing these issues during the financial planning process will help state departments of transportation build more effective relationships with the legislature that can, in turn, lead to increased funding for transportation infrastructure.

### B. Dealing with Multiple Interests

The passage of ISTEA has changed the way state departments of transportation do business. TEA-21 further broadened the range of interests that must be included in the planning process. Transportation providers and other stakeholders are now involved in all stages of

the decision process. At the same time, the fact that these transportation interests are now involved in the decision making process has led to the expectation that there will be increased funding for programs supporting alternative modes. This creates a situation where state departments of transportation must set the stage for addressing equity issues more carefully than ever before and ensure that decisions regarding the distribution of scarce funding are made based on compromises that are acceptable to all participants.

## **C. Addressing Equity Issues**

One of the most challenging aspects of financial planning for transportation infrastructure is addressing the distribution of funds among modes, different regions with different needs (e.g. urban vs. rural), and between capital, maintenance, and operation of transportation facilities, services, and equipment. If the approach described above is used to address the different transportation interests participating in the planning process, the following can further assist state departments of transportation in addressing issues of funding distribution.

### **1. Funding Distribution Among Modes**

Traditionally, state departments of transportation have been responsible for planning and programming for highway infrastructure only. In the last decade, but in particular since the passage of ISTEA, they have begun to carry out planning and programming for other modes as well—including those over which they do not have control or funding authority. The distribution of funds from traditional transportation funding sources among different modes is difficult because most state and federal funds are dedicated to a specific mode or even a specific type of project. Dedicated funds have the advantage of providing a steady, predictable funding source that can be planned for.

The federal government has recognized this concern and acted accordingly. With the passage of ISTEA and subsequent legislation, it has provided state departments of transportation with the ability to use funds from several programs to support alternative modes. The two programs that allow significant amounts of flexibility in the use of the funds are the STP and the Congestion Mitigation and Air Quality Improvement Program (CMAQ). Some states, including Washington, as well as the federal government, have begun to use user fees collected from one mode to support other modes. In Washington, transit systems are entitled to a fixed portion of motor vehicle excise taxes. In addition, a certain portion of all highway funds is earmarked for projects supporting bicycling and walking.

State financial planners, in cooperation with transportation interests in the state, should explore the possibility of a state transportation fund that supports all modes. The fund can still maintain dedicated levels of funding or proportionate apportionments of funds for individual modes. If the service objectives and goals developed in the overall

planning process contain goals and objectives that are quantifiable for each mode, relative proportions of funding can be established.

## **2. Addressing Regional Distribution**

The distribution of scarce funds among regions with different needs is a common point of contention between state departments of transportation and local elected officials who feel that their city, rural area, or border area does not receive the amount of funding for transportation infrastructure it needs. Most state departments of transportation have therefore developed elaborate funding distribution mechanisms for many programs and funding categories, particularly with regard to highways. A long-range financial planning effort can help alleviate these concerns by providing a basis for funding decisions that work towards achieving overall service objectives and goals in a measurable way within a clearly defined time frame.

## **3. Addressing Distribution Among Capital, Maintenance, and Operations Functions**

Long-term financial planning should address the distribution of funds not only among different modes and regions of a state, but also among capital, maintenance, and operations expenditures. This approach can help state departments of transportation in providing information about the impact of different funding scenarios and levels on the quality and capacity of the transportation system. Transportation decision makers and legislators can then see the impact of different funding levels and determine whether they are willing to accept certain service levels or whether they want to increase funding to ensure that their minimum requirements are fulfilled.

## **D. Addressing Funding Flexibility**

The authors of ISTEA and subsequent federal legislation have addressed concerns about a lack of flexibility with regard to federal transportation funding sources, and have provided a considerable amount of flexibility in the use of funds from the STP. Similarly, funds from the federal CMAQ can be applied to alternative modes or even transportation demand management projects.

FHWA has indicated that since inception of ISTEA, state departments of transportation are increasingly taking advantage of the flexibility provided by the legislation. Transfers grew from just below \$6 million in 1991 to almost \$610 million in 1994. In addition, FHWA reports that it has administered over \$1.1 billion in STP, CMAQ and National Highway System funds for multimodal transportation projects such as HOV facilities, van pool projects, park-and-ride lots, and multimodal planning activities.

State financial planners might want to explore the potential for using (additional) portions of these federal funds for multimodal objectives before they embark on a more broadly

based effort to develop new flexible funding sources or remove the dedication of existing funding sources to specific modes. The latter will have to be carefully planned and set in an acceptable policy context.

## **E. Coordinating with Other Financial Planning**

Financial planning in the context of the statewide, long-range, multimodal plan is not carried out in a vacuum; rather, it takes place in the context of other planning efforts that include a financial planning component.

Since the passage of ISTEA, all metropolitan planning organizations must develop a long-range multimodal transportation plan that is “financially constrained,” meaning that it cannot contain programs or projects for which the metropolitan planning organization does not have a “reasonable” expectation that funding will be available. Statewide long-range plans must be coordinated with the planning efforts of metropolitan planning organizations, including their financial plans. However, because the first long-range plans developed under ISTEA were prepared simultaneously, this coordination is not yet well established but can be expected to increase in future planning efforts in many states.

State transportation planners may find it useful to work with metropolitan transportation planning organization and finance staff and planners from other transportation providers in developing the assumptions for projections of future revenues. Florida’s planners provide metropolitan planning organizations with unit cost figures for transportation facilities that are adjusted for each area to support sketch planning efforts. In addition, using the same or at least a compatible analytical framework will help in collecting the kind of needs information required to get changes in funding levels or new funding sources through the legislature. Coordination with other transportation providers like metropolitan planning organizations, transit systems, sea and airports, and others, can also be a foundation in building the coalitions that may be required to effect a policy change.

## **F. Integration with STIP and Budgeting**

Long-range financial planning should be coordinated with short-term planning, programming, and budgeting. The Statewide Transportation Improvement Program (STIP), as it is usually called, comprises the short-term plan for the state. Since normally its first three years must be financially constrained, funding must be identified for all projects to be funded in these years. The broader financial planning maxims identified in the long-range plan are applied to develop annual budgets funding projects contained in the STIP. This process can be both a starting point and a reality check for the long-range plan because it allows state departments of transportation to test the viability of its long-range financial planning approach.



## **IX. Financing the Plan**



Considering financial constraints is key to establishing plan priorities and specifying how the plan will be implemented. The following provides examples of how states have considered finance in their long-range plans.

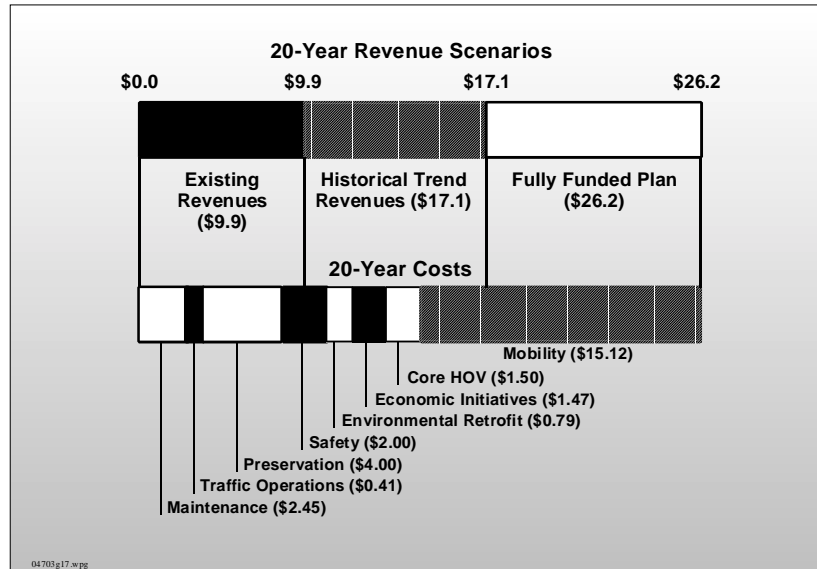
### **A. Developing a Priority and Trade-off Strategy**

Since it is not likely that there will be enough money to fully fund the plan, it will be necessary to review and revise the service objectives to better reflect the financial limitations under which the plan will be implemented. This will usually be the course of action when costs exceed revenues by a very large margin. Another approach would be to prioritize the service objectives that are contained in the plan and to accept that not all service objectives can be fully achieved.

This is illustrated by the Washington State Transportation Commission's priority strategy. They have acknowledged that funding sources for highways will not be sufficient to meet all needs, or even the service objectives identified through their planning process. They determined the approximate size of the funding gap. Washington's Transportation Commission then took another look at the service objectives contained in the plan and prioritized them. Some objectives, like highway preservation, maintenance, and safety are considered critical and will be fully funded. Other objectives, like highway capacity improvement, are considered less important and may not be fully funded.

This shows that Washington has decided to address needs and objectives only to the extent that can be achieved with expected funding by prioritizing them and making trade-offs between different planning goals. This approach allows the state to financially constrain its plan. Based on these priorities, and the revenue forecasts, the Washington State Department of Transportation is able to graphically illustrate to what extent planning objectives can be achieved with the currently expected revenues. Exhibit IX-1 illustrates this process for planning objectives related to highways. All objectives except capacity improvements are fully funded under this approach.

**Exhibit IX-1: State Highway System Plan Trade-off Decisions**  
 (1995 Billion Dollars)



Source: Washington State Department of Transportation, Washington’s Transportation Plan 1997-2016, 1996.

Many statewide plans carry financial planning to this level. There are a number of state departments of transportation, however, that also develop ways to actively reduce the funding gap and provide new and innovative sources of funding to support the overall plan. One such approach is outlined in the following section.

**B. Developing Finance Policies, Strategies, and Actions**

The sections above describe how financial planning may be carried out as part of a long-term, statewide, multimodal planning process. However, financial planning can and should also be integrated in the policy direction and the strategies for plan implementation. This section describes how this can be achieved. It uses as an example the funding strategies that were developed for the Texas Department of Transportation’s (TxDOT) first long-range, statewide, multimodal transportation plan.

TxDOT solicited the help of a committee of representatives from Texas’ metropolitan planning organizations, cities, counties, transit and other transportation providers and the private sector to develop finance policies, strategies, and actions for the Texas Transportation Plan.

The committee evaluated existing funding sources and determined funding needs and issues as described above. From this analysis, the committee developed finance policies that help support the goals of the overall plan and address these issues. It also identified strategies and actions that will help TxDOT implement these policies. The following example

highlights some of the issues that were identified, provides the policy direction given by the committee, and lists the strategies and actions that can help implement this policy.

**Exhibit IX-2: The Texas Transportation Plan  
Finance Issue Committee: Alternative Recommendations Summary**

<b>Issue:</b> Funding sources should be used in an optimal fashion.	
<b>Policy:</b> Optimize the use of existing funding sources.	
<b>Strategies</b>	<b>Actions</b>
Ensure collection of funds from existing taxes.	Restructure collection approaches to reduce evasion of motor vehicle fuel and diesel taxes.
Generate income from transportation assets and ensure its use for transportation purposes.	Aggressively pursue leasing of subsurface, land, and air rights over and under transportation assets and concessions to generate revenue.  Continue the current policy of disposing of surplus assets and ensure that the receipts are retained for transportation purposes.
Leverage state revenues.	Use the authority to support public-private partnerships with federal revenues.

<b>Issue:</b> Current revenue sources are declining in value over time.	
<b>Policy:</b> Maintain the purchasing power of existing transportation revenue sources.	
<b>Strategies</b>	<b>Actions</b>
Tie user fees to inflation.	Seek legislation to tie the motor fuel tax to the construction price index.  Seek legislation to tie the motor vehicle registration fees and excise taxes to the value of the automobile.
Address the loss of user fee revenues due to increased fuel efficiency and alternative fuels.	Use the vehicle registration fee in combination with phased-in increases in taxes on alternative fuels to balance the need to recover lost revenue, due to increased fuel efficiency and alternative fuels, with Texas air quality goals.  Develop an overall funding package that balances the need for fuel-based user fee revenues with Texas air quality goals in the long run.

<b>Issue:</b> <b>There is an inability to meet current and projected needs.</b>	
<b>Policy:</b> <b>Obtain sufficient revenues to meet essential transportation needs.</b>	
<b>Strategies</b>	<b>Actions</b>
Maximize revenues from existing funding sources.	<p>Seek to maximize revenues from existing user fees:</p> <ul style="list-style-type: none"> <li>– Seek legislation to increase motor fuel tax rates.</li> <li>– Seek legislation to increase motor vehicle registration fees and other taxes on vehicles.</li> </ul> <p>Develop a statewide toll road and bridge system and back bonds with system-wide toll revenues rather than project level revenues.</p>
Identify and implement new and innovative financing sources.	<p>Dedicate indirect revenues from transportation users to transportation purposes where they are currently not dedicated:</p> <ul style="list-style-type: none"> <li>– Ensure an adequate source of funding for general aviation airports through the dedication of existing aviation-related sales, excise, and franchise taxes.</li> <li>– Provide a stable source of funding for small urban and rural transit systems by providing ongoing general revenue appropriations and/or dedicating general sales taxes to public transportation.</li> </ul> <p>Seek legislation to create a “Transportation Fund” which can be used for transit and other modes, supported by new funding sources like emission fees.</p> <p>Seek legislation and/or constitutional amendment to allow bonding authority for TxDOT.</p> <p>Seek legislation for a state revolving loan fund or a state bond bank for transportation infrastructure.</p> <p>Seek legislation for congestion pricing demonstration programs on appropriate facilities.</p> <p>Seek legislation for emission fees.</p> <p>Seek legislation for land banking and leasing authority for TxDOT.</p>

<b>Issue:</b> <b>There is an inability to fund special needs.</b>	
<b>Policy: Fund special needs.</b> <b>Funding of international and NAFTA-related projects</b>	
<b>Strategies</b>	<b>Actions</b>
Provide funding mechanisms to meet international trade-related needs.	Develop public/private partnerships for international and NAFTA-related projects. Seek federal funds to pay for NAFTA-related transportation needs which benefit the country as a whole. Optimize the use of debt financing secured by tolls for border-related projects.
<b>A large backlog of needs exists both in the urban and rural areas of the state.</b>	
Provide funding mechanisms to meet large "one-time" needs.	Seek legislative authorization for a one-time state bond issue to address the backlog of needs of local governments. Seek legislative authorization for a state bond issue to fund identified large projects.
<b>Major cities in Texas increasingly face problems in maintaining their street networks.</b>	
Implement an urban streets program at the state level to address rehabilitation of deficient roadways.	Dedicate a portion of the state gas tax to city streets and arterials:  — Dedicate a portion of the state motor fuel tax to cities based on population.  — Distribute a portion of the motor fuel tax to cities based on need and a set of clearly defined criteria. Seek legislation to allow for local option user taxes.

<b>Issue:</b> <b>There is insufficient cost responsibility.</b>	
<b>Policy:</b> <b>Provide a transportation revenue structure that ensures cost responsibility.</b>	
<b>Strategies</b>	<b>Actions</b>
Internalize the true costs of the transportation decisions of all users to the extent possible.	Analyze existing user fees to change the structure towards greater cost responsibility. Implement a weight-distance tax or increased vehicle registration fees for truck-trailer combinations to achieve greater cost responsibility. Evaluate congestion pricing, emission fees, and similar measures to provide greater cost responsibility for the environmental and congestion-related effects of automobiles.

Source: Texas Department of Transportation, The 1994 Texas Transportation Plan: Policy Papers, 1994.

## X. Success Factors



The development of a successful long-term financial plan can be hampered by certain influences, and it can be supported by other factors. In the following, we have listed factors that contribute to the success of financial planning efforts. Planners can increase the likelihood of success by being aware of these factors and considering them.

### A. Success Factors

There are a number of factors than can increase the utility of financial planning as part of statewide transportation planning. They include:

- **Use financial information to allow decision makers to clearly understand the implications of different funding levels/strategies in achieving the performance objectives and goals of the statewide planning process.**

Optimally, a good financial planning process will allow decision makers to see to what extent the state will be able to address or meet the performance objectives that were set in the statewide planning process. They can then decide whether they should reduce the objectives to stay within the projected funding levels, prioritize among different objectives, or make a decision to increase revenue for the transportation system.

- **Establish realistic assumptions for future funding levels and/or sources.**

Although TEA-21 does not require that statewide multimodal long-range transportation plans be financially constrained, it is important to make assumptions about future funding levels that are credible, transparent, and can be replicated.

- **Use financial analysis to establish a vision for the state's transportation future that is reasonably realistic.**

Long-range statewide multimodal transportation planning should establish a vision of the future transportation system for a state, allowing the state to proactively shape its transportation future rather than to react to the pressures of economic and population growth. On the other hand, as indicated above, it is necessary to develop a plan that is reasonably realistic and that can likely be financed. A good financial planning process must address this tension in order to allow the overall statewide plan to fulfill its purpose.

# APPENDIX

## User Fee Structure of the Federal Highway Trust Fund

### Federal Highway User Taxes

Fuel Type	Effective Date	Tax Rate (cents per gallon)	Distribution of Tax				
			Highway Trust Fund		Leaking Underground Storage Tank Trust Fund	General Fund	
			Highway Account	Mass Transit Account			
Gasoline	10/01/1997	18.4	15.44	2.86	0.1	-	
Diesel	10/01/1997	24.4	21.44	2.86	0.1	-	
Gasohol (10% ethanol)	10/01/1997	13	6.94	2.86	0.1	3.1	
	01/01/2001	13.1	7.04	2.86	0.1	3.1	
	01/01/2003	13.2	7.14	2.86	0.1	3.1	
	01/01/2005	13.3	7.24	2.86	0.1	3.1	
<b>Special Fuels:</b>							
	General rate	10/01/1997	18.4	15.44	2.86	0.1	-
	Liquefied petroleum gas	10/01/1997	13.6	11.47	2.13	-	-
	Liquefied natural gas	10/01/1997	11.9	10.04	1.86	-	-
	M85 (from natural gas)	10/01/1997	9.25	7.72	1.43	0.1	-
	Compressed natural gas (cents per thousand cu. ft.)	10/01/1997	48.54	38.83	9.70	-	-
<b>Truck Related Taxes — All proceeds to Highway Account</b>							
Tire Tax	0-40 pounds, no tax Over 40 pounds - 70 pounds, 15¢ per pound in excess of 40 Over 70 pounds - 90 pounds, \$4.50 plus 30¢ per pound in excess of 70 Over 90 pounds, \$10.50 plus 50¢ per pound in excess of 90						
Truck and Trailer Sales Tax	12 percent of retailer's sales price for tractors and trucks over 33,000 pounds GVW and trailers over 26,000 pounds GVW						
Heavy Vehicle Use Tax	Annual tax: Trucks 55,000 pounds and over GVW, \$100 plus \$22 for each 1,000 pounds (or fraction thereof) in excess of 55,000 pounds (maximum tax of \$550)						

Source: FHWA, TEA-21 Summary, Fact Sheets, 1998.



**Authorization Levels of Highway Programs Administered by FHWA Under TEA-21 (Amounts in Millions of Dollars)**

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total	Average
Interstate Maintenance Program	3,427.341	3,957.103	3,994.524	4,073.322	4,139.630	4,217.635	23,809.555	3,968.2592
National Highway System	4,112.480	4,748.523	4,793.429	4,887.986	4,967.556	5,061.162	28,571.136	4,761.8560
Bridge Program	2,941.454	3,395.354	3,427.472	3,495.104	3,552.016	3,618.966	20,430.366	3,405.0610
Surface Transportation Program	4,797.620	5,539.944	5,592.333	5,702.651	5,795.482	5,904.689	33,332.719	5,555.4532
Congestion Mitigation/Air Quality Improvement Program	1,192.619	1,345.415	1,358.138	1,384.930	1,407.474	1,433.996	8,122.572	1,353.7620
Appalachian Development Highway System	0.000	450.000	450.000	450.000	450.000	450.000	2,250.000	375.0000
Recreational Trails Program	30.000	40.000	50.000	50.000	50.000	50.000	270.000	45.0000
Federal Lands Highways Program:	536.000	706.000	706.000	706.000	706.000	706.000	4,066.000	677.6667
Indian Reservation Roads	(225.000)	(275.000)	(275.000)	(275.000)	(275.000)	(275.000)	(1,600.000)	(266.6667)
Public Lands Highways	(196.000)	(246.000)	(246.000)	(246.000)	(246.000)	(246.000)	(1,426.000)	(237.6667)
Park Roads and Parkways	(115.000)	(165.000)	(165.000)	(165.000)	(165.000)	(165.000)	(940.000)	(156.6667)
Refuge Roads	0.000	(20.000)	(20.000)	(20.000)	(20.000)	(20.000)	(100.000)	(16.6667)
National Corridor Planning and Development and Coordinated Border Infrastructure Program	0.000	140.000	140.000	140.000	140.000	140.000	700.000	116.6667
Construction of Ferry Boats and Ferry Terminal Facilities	30.000	38.000	38.000	38.000	38.000	38.000	220.000	36.6667
National Scenic Byways Program	23.500	23.500	24.500	24.500	25.500	26.500	148.000	24.6667
Value Pricing Pilot Program	0.000	7.000	11.000	11.000	11.000	11.000	51.000	8.5000
High Priority Projects Program	1,029.584	1,403.978	1,684.773	1,684.773	1,778.372	1,778.372	9,359.850	1,559.9750
Highway Use Tax Evasion Projects	10.000	5.000	5.000	5.000	5.000	5.000	35.000	5.8333
Commonwealth of Puerto Rico Highway Program	110.000	110.000	110.000	110.000	110.000	110.000	660.000	110.0000
Railway-Highway Crossing Hazard Elimination in High-Speed Rail Corridors (GF)	0.000	15.000	15.000	15.000	15.000	15.000	75.000	12.5000
Minimum Guarantee*	5,482.379	5,760.600	5,798.972	5,922.179	6,014.128	6,140.996	35,119.254	5,853.2090
Revenue Aligned Budget Authority	ssambn	ssambn	Ssambn	ssambn	ssambn	ssambn	0.000	0.0000
Woodrow Wilson Memorial Bridge	25.000	75.000	150.000	200.000	225.000	225.000	900.000	150.0000
Miscellaneous Studies, Reports, and Projects (HTF & GF)	13.588	159.231	44.063	25.000	18.800	17.300	277.981	46.3302
Magnetic Levitation Transportation Technology Deployment Program	0.000	15.000	20.000	25.000	0.000	0.000	60.000	10.0000
Low-Speed MAGLEV Project (STA)	0.000	ssambn	ssambn	ssambn	ssambn	0.000	0.000	0.0000
Magnetic Levitation Transportation Technology Deployment Program (STA)	0.000	0.000	200.000	200.000	250.000	300.000	950.000	158.3333
Transportation and Community and System Preservation Pilot Program	0.000	20.000	25.000	25.000	25.000	25.000	120.000	20.0000
Transportation Assistance for Olympic Cities	ssambn	ssambn	ssambn	ssambn	ssambn	ssambn	0.000	0.0000
National Historic Covered Bridge Preservation (GF)	0.000	10.000	10.000	10.000	10.000	10.000	50.000	8.3333
Safety Incentive Grants for Use of Seat Belts	0.000	82.000	92.000	102.000	112.000	112.000	500.000	83.3333
Safety Incentives to Prevent Operation of Motor Vehicles by Intoxicated Persons	55.000	65.000	80.000	90.000	100.000	110.000	500.000	83.3333
Transportation Infrastructure Finance and Innovation	0.000	80.000	90.000	110.000	120.000	130.000	530.000	88.3333
<b>Total-Title I</b>	<b>23,816.565</b>	<b>28,191.647</b>	<b>28,910.204</b>	<b>29,487.445</b>	<b>30,065.958</b>	<b>30,636.616</b>	<b>171,108.433</b>	<b>28,518.0722</b>

Amounts in parentheses are non-additive.  
 STA = "subject to appropriation."  
 Ssambn = "Such sums as may be necessary."

\* = Estimated amounts.  
 GF = General Fund of the Treasury  
 HTF = Highway Trust Fund

NOTE: Programs under Titles I, II, IV, and V are funded from the Highway Account of the Highway Trust Fund unless otherwise noted. Programs under Title III are funded from the Mass Transit Account of the Highway Trust Fund unless otherwise noted.

## Authorization Levels of Transit Programs Administered by FTA Under TEA-21 (Amounts in Millions of Dollars)

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	Total	Average
Formula Grants	2,260.000	2,280.000	2,478.400	2,676.000	2,873.600	3,071.200	15,639.200	2,606.5333
Formula Grants (GF)	240.000	720.000	769.600	819.000	868.400	917.800	4,334.800	722.4667
Alaska Railroad	(4.850)	(4.850)	(4.850)	(4.850)	(4.850)	(4.850)	(29.100)	(4.8500)
Clean Fuels	0.000	(50.000)	(50.000)	(50.000)	(50.000)	(50.000)	(250.000)	(41.6667)
Urbanized Area Formula Grants	(2,298.853)	(2,698.191)	(2,922.840)	(3,147.316)	(3,370.602)	(3,595.940)	(18,033.791)	(3,005.6318)
Formula Grants for Other than Urbanized Areas	(134.078)	(177.924)	(193.613)	(209.283)	(224.874)	(240.608)	(1,180.379)	(196.7299)
Formula Grants and Loans for Special Needs of Elderly Individuals and Individuals with Disabilities	(62.219)	(67.036)	(72.947)	(78.851)	(84.725)	(90.653)	(456.430)	(76.0717)
Rural Transportation Accessibility Incentive Program-Intercity, Fixed-Route	0.000	(2.000)	(2.000)	(3.000)	(5.250)	(5.250)	(17.500)	(2.9167)
Rural Transportation Accessibility Incentive Program-Other	0.000	0.000	(1.700)	(1.700)	(1.700)	(1.700)	(6.800)	(1.1333)
Capital Program Grants and Loans	2,000.000	1,805.600	1,960.800	2,116.800	2,272.800	2,428.800	12,584.800	2,097.4667
Capital Program Grants and Loans (GF)	0.000	1,051.400	1,100.200	1,149.200	1,198.200	1,237.200	5,736.200	956.0333
Bus and Bus Related Facilities	(400.000)	(551.400)	(590.200)	(629.200)	(668.200)	(707.200)	(3,546.200)	(591.0333)
Fixed Guideway Modernization	(800.000)	(1,002.800)	(1,080.400)	(1,158.400)	(1,236.400)	(1,314.400)	(6,592.400)	(1,098.7333)
New Starts	(800.000)	(1,302.800)	(1,590.400)	(1,478.400)	(1,566.400)	(1,644.400)	(8,182.400)	(1,363.7333)
Transit Planning	0.000	42.200	48.400	50.200	53.800	58.600	253.200	42.2000
Transit Planning (GF)	47.750	42.800	44.600	46.800	48.200	50.400	280.550	46.7583
Transit Research	0.000	36.000	37.600	37.600	39.200	39.200	189.600	31.6000
Transit Research (GF)	44.250	40.000	40.400	42.400	42.800	43.800	253.650	42.2750
National Planning and Research	(26.750)	(58.500)	(60.500)	(62.500)	(64.500)	(65.500)	(338.250)	(56.3750)
Rural Transit Assistance	(4.500)	(5.250)	(5.250)	(5.250)	(5.250)	(5.250)	(30.750)	(5.1250)
Transit Cooperative Research	(4.000)	(8.250)	(8.250)	(8.250)	(8.250)	(8.250)	(45.250)	(7.5417)
National Transit Institute	(3.000)	(4.000)	(4.000)	(4.000)	(4.000)	(4.000)	(23.000)	(3.8333)
Clean Fuels Formula Grant Program (GF)	0.000	100.000	100.000	100.000	100.000	100.000	500.000	83.3333
University Transportation Research	0.000	4.800	4.800	4.800	4.800	4.800	24.000	4.0000
University Transportation Research (GF)	6.000	1.200	1.200	1.200	1.200	1.200	12.000	2.0000
Administration	0.000	43.200	48.000	51.200	53.600	58.400	254.400	42.4000
Administration (GF)	45.738	23.800	26.000	28.800	30.400	32.600	187.338	31.2230
Job Access and Reverse Commute Grants	0.000	40.000	60.000	80.000	100.000	120.000	400.000	66.6667
Job Access and Reverse Commute Grants (GF)	0.000	110.000	90.000	70.000	50.000	30.000	350.000	58.3333
<b>Total-Title III</b>	<b>4,643.738</b>	<b>6,341.000</b>	<b>6,810.000</b>	<b>7,274.000</b>	<b>7,737.000</b>	<b>8,194.000</b>	<b>40,999.738</b>	<b>6,833.2897</b>

Amounts in parentheses are non-additive.  
 STA = "subject to appropriation."  
 Ssambn = "Such sums as may be necessary."

\* = Estimated amounts.  
 GF = General Fund of the Treasury  
 HTF = Highway Trust Fund

NOTE: Programs under Titles I, II, IV, and V are funded from the Highway Account of the Highway Trust Fund unless otherwise noted. Programs under Title III are funded from the Mass Transit Account of the Highway Trust Fund unless otherwise noted.

## State Infrastructure Loans and Loan Agreements (as of June 1, 1998)

State	Project	Project Cost (\$000)	Loan Amount (\$000)	Interest Rate	Draw Date	Repayment Source	
<b>LOANS</b>							
1	Missouri	Springfield Transportation Projects	39,360	1,180	3.70%	04.01.97	Local dedicated sales tax increment financing and State Highway Fund
				1,690	3.50%	04.01.99	Local dedicated sales tax increment financing and State Highway Fund
2	Missouri	Cape Girardeau Bridge	102,198	8,000	5.30%	10.07.97	State and future federal funds
				20,000	5.30%	02.06.98	State and future federal funds
3	Ohio	Butler Regional Highway	150,000	10,000	6.00%	10.16.96	Bond proceeds
4				10,000	6.00%	01.13.97	Bond proceeds
5				15,000	6.00%	05.19.97	Bond proceeds
6	Ohio	Great Lakes Science Center Parking Facility	7,825	7,825	6.00%	05.01.97	Parking fees
7	Ohio	Fort Washington Way Relocation	120,000	20,000	5.00%	03.01.98	Future city income and sales tax
8	Ohio	Cleveland Transit Viaduct	25,000	6,900	4.25%	04.01.98	County sales tax
9	Ohio	Project Monaco (Marion, OH)	2,025	2,025	4.00%	04.01.98	Payment in lieu of property taxes (TIF)
10	Ohio	Cincinnati Industrial Park Access Road Improvements	645	645	4.00%	04.01.98	City's capital improvement fund (primarily payroll tax receipts)
11	Ohio	Brower Road Improvements, Lima MPO	950	950	4.00%	06.01.98	Future federal funds
12	Oregon	Ash Creek Bridge Replacement	850	735	4.00%	04.01.98	Future federal highway funds, city revenues
13	Oregon	Signal Priority System	781	781	4.18%	05.15.98	Transit District revenues (primarily payroll tax receipts)
14	New Mexico	City of Moriarty Intersection Signal	541	541		03.31.98	
15	Texas	Laredo Bridge #4	61,400	27,000			
16	Texas	State Route 190 – Bush Turnpike*	1,000,000	20,000	4.20%	10.01.97	Toll revenues
		<b>SUBTOTAL</b>	<b>1,511,575</b>	<b>153,272</b>			
<b>LOAN AGREEMENTS</b>							
1	Arizona	Price Corridor Segments	56,600	26,000	3.67%	03.01.99	Earmarked sales tax revenues
2	Arizona	Red Mountain Freeway Segments	60,400	13,700	3.67%	07.01.98	Earmarked sales tax revenues
3	Florida	Branan Field Road Construction – Clay City	27,046	4,980	0.00%	1999	State DOT District funds (deriving mainly from gas tax receipts)
4	Florida	Branan Field Road Construction – Duval City	36,255	13,406	0.00%	1999	State DOT District funds
5	Florida	Congress/Australian Connector	11,529	8,365	0.00%	tbd	State DOT District funds
6	Florida	I-275 Widening	11,801	2,327	0.00%	1999	Future federal highway funds
7	Florida	SR77 Reconstruction	27,046	5,598	0.00%	2000	State DOT District funds
8	Florida	SR80 Improvements	20,448	4,386	0.00%	tbd	State DOT District funds
9	Florida	SR540 Improvements	18,727	2,590	0.00%	1999	State DOT District funds
10	Florida	SR655 Construction	14,948	6,953	0.00%	1999	State DOT District funds
11	Florida	SR44 Widening and Rehabilitation	20,500	9,800	tbd		State DOT District funds
12	Florida	SR30 (US98) to SR73 to SR295	12,100	2,400	tbd		Future federal highway funds
13	Florida	Recker Hwy, US17 to Winterlake Construction	14,900	7,000	tbd		State DOT funds
14	Florida	Lee County Trolley Purchase	720	720	0.00%	1999	Future federal transit funds
15	Michigan	Center Street Reconstruction	2,000	700	4.00%		City funds
16	Missouri	Cole County Highway 179	37,544	6,000	3.50%	11.01.02	Earmarked local sales tax revenues and State Highway Fund
17	New Jersey	Atlantic City Expressway	1,500	1,500	tbd	06.20.05	Expressway toll revenues
18	Ohio	Market Street Improvements (Canton, OH)	12,469	1,200	4.25%	07.01.98	City-pledged excess revenues (primarily income tax)
19	Texas	State Route 190 – Bush Turnpike*	see above	40,000	4.20%	10.01.98	Toll revenues
20			see above	20,000	4.20%	10.01.98	Toll revenues
21	Wyoming	Cody to Yellowstone Park Improvement	15,000	15,000	0.00%	10.01.98	Future federal highway funds and state highway funds
		<b>SUBTOTAL</b>	<b>401,533</b>	<b>192,625</b>			
		<b>GRAND TOTAL</b>	<b>1,913,108</b>	<b>345,897</b>			

\* SR190 received two loan disbursements under 23 USC 129, prior to establishment of the Texas SIB. Those obligations were subsequently adopted by the SIB. The two previous loan disbursements were made on 1/1/96 in the amounts of \$20 million and on 10/1/96 for \$35 million. It is anticipated that the full \$135 million from all prior and future loan disbursements will be repaid to the Texas SIB.