

8.0 Planned Investments & Funding

- 8.1 Federal Funding Programs and Fiscal Outlook 8-1
- 8.2 State and Local Funding Sources..... 8-4
- 8.3 Revenue Projections 8-6
- 8.4 Prioritizing Needs for Fiscal Constraint..... 8-7
- 8.5 Scheduled Investments 8-8
- 8.6 Summary of Revenue & Expenditures 8-10
- 8.7 Ongoing Maintenance Costs 8-13
- 8.8 Additional Funding Options 8-14

8.1 Federal Funding Programs and Fiscal Outlook

The federal government is the largest source of funding for improvements to the region’s major roadway network identified in this RTP. The Federal-Aid Highway Act and the Highway Revenue Act in 1956 established the Highway Trust Fund in order to create a financing mechanism for the Interstate Highway System.

MAP-21 continues many grant programs established by U.S. Congress through previous transportation funding bills but further expanded the flexibility afforded to states and MPOs for the use of federal transportation funds. Once used primarily for highway improvements on state and federal roadways, these funds can now be used for a multitude of transportation related activities. Certain funds can now be used for projects such as roadway aesthetics, pedestrian and bicycle facilities, environmental impact mitigation, preservation of historic transportation facilities, transit facilities, and right-of-way corridor preservation.

Generally speaking, program funds come from a motor fuels tax and are administered by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The following programs are included in the Highway Trust Fund, some as part of the Trust Fund’s embedded Mass Transit Account.

Type of Grant/ Method of Administration and Allocation

- **Formula Grants:** Funding for these programs are distributed to states according to mathematical formulas at the direction of U.S. Congress via the FHWA and FTA of the U.S. DOT. The specific formula varies by individual grant program, but generally include factors related to the population and transportation system. Once distributed, states have considerable discretion on how to use the funding so long as they coordinate the project selection process with local communities.
- **Direct Suballocation:** Directly suballocated funds are the share of certain formula grant programs that Congress requires to be distributed to urbanized areas to ensure that a minimum level of investment is made in these areas. The most commonly suballocated grant programs are the FHWA Surface Transportation Program, the FHWA Transportation Alternatives Program, and the FTA 5307 Urban Transit Program. Once suballocated, the MPO for the receiving urbanized area takes the lead on selecting projects in coordination with the state and local governments.
- **Discretionary Grants:** Funding for discretionary grant programs is usually retained by the U.S. DOT Office of the Secretary or by FHWA or FTA to be awarded to projects through a nationwide competitive process. These programs are typically aimed at large capital projects of national significance.

The following tables presents an overview of the various funding sources available to pay for transportation projects and programs in MAP-21. In general, the federal share of the cost of a project or program is 80 percent, requiring a 20 percent cost share, or match, from non-federal sources. Matching funds are typically provided by the agency implementing the project.

Figure 8-1 Federal Formula Grant Programs and Annual Apportionments

	U.S.*	Tenn.	MPO
National Highway Performance Program (NHPP)	\$21.9 B	\$492.9 M	\$109.0 M
<i>The NHPP provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS. (MAP-21 §1106; 23 USC 119)</i>			
Surface Transportation Program (STP)**	\$10.1 B	\$226.8 M	\$59.2 M
<i>The STP provides flexible funding that may be used by States and local agencies for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. (MAP-21 §1108; 23 USC 133)</i>			
Highway Safety Improvement Program (HSIP)	\$2.4 B	\$49.5 M	\$11.8 M
<i>The HSIP is intended to help achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. This program includes the Railway-Highway Crossings Program (RHCP) (MAP-21 §1112; 23 USC 130 and 148)</i>			

Congestion Mitigation Air Quality Program (CMAQ)	\$2.2 B	\$37.0 M	\$8.9 M
<i>The CMAQ program provides a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas). (MAP-21 §1113; 23 USC 149)</i>			
Transportation Alternatives Program (TA)**	\$0.8 B	\$18.9 M	\$5.0
<i>TA provides for a variety of alternative transportation projects, including many that were previously eligible activities under separately funded programs. The TAP replaces the funding from pre-MAP-21 programs including Transportation Enhancements, Recreational Trails, and Safe Routes to School, wrapping them into a single funding source. (MAP-21 §1122; 23 USC 101, 206, 213)</i>			
Urbanized Area Transit Program (FTA 5307)**	\$4.5 B		\$23.1 M
<i>The FTA 5307 program provides grants to urbanized areas (UZAs) for public transportation capital, planning, and limited operating assistance. The program serves as the core investment in the enhancement and revitalization of transit systems in the nation's urbanized areas which depend on public transportation to improve mobility and manage congestion. (MAP-21 §20007, 20026; 49 USC 5307, 5336, 5340)</i>			
Rural Area Transit Program (FTA 5311)	\$0.6 B	\$226.8 M	\$1.8 M
<i>The FTA 5311 program provides capital, planning, and operating assistance to support for public transportation in rural areas outside of urbanized areas (UZAs). (MAP-21 §20010; 49 USC 5311)</i>			
Enhanced Mobility for Seniors & the Disabled (FTA 5310)	\$0.3 B	\$49.5 M	\$1.2 M
<i>The FTA 5310 program is intended to improve mobility for seniors and individuals with disabilities by removing barriers to transportation services and expanding transportation options. The program provides capital support for transportation services planned, designed, and carried out to meet the special needs of these populations. (MAP-21 §20009; 49 USC 5310)</i>			
Transit State of Good Repair Program (FTA 5337)	\$2.1 B	\$37.0 M	\$2.4 M
<i>The FTA 5337 program provided funding to repair and upgrade the nation's rail transit and fixed-guideway (dedicated-lane) bus systems. (MAP-21 §20027; 49 USC 5337)</i>			
Bus and Bus Facilities Program (FTA 5339)	\$0.4 B	\$18.9 M	\$1.6 M
<i>The FTA 5339 program provides capital funding to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities for customer services, program administration and fleet maintenance. (MAP-21 §20029; 49 USC 5339)</i>			

**Based on FY 2014 Apportionment **A portion or all of this grant program is directly suballocated to the Urbanized Areas (UZAs)*

Figure 8-2 Federal Competitive Grant Programs and Annual Apportionments

	U.S.*
Transportation Investment Generating Economic Recovery Program (TIGER)	\$600 M
<i>Initially created through the American Recovery and Reinvestment Act of 2009 (ARRA), the TIGER program provides an opportunity for the U.S. DOT to invest in road, rail, transit and port projects that promise to achieve national objectives. Since 2009, Congress has dedicated more than \$4.1 billion for six rounds of TIGER to fund projects that have a significant impact on the nation, a region or a metropolitan area. (Consolidated Appropriations Act of 2014)</i>	
Fixed Guideway Capital Investment Program “New Starts” (FTA 5309)	\$1.9 B
<i>The “New Starts” program provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options along key regional corridors. (MAP-21 §20008; 49 USC 5309)</i>	
Transportation Infrastructure Finance and Innovation Act (TIFIA)**	\$1.0 B
<i>The TIFIA program provides Federal credit assistance to eligible surface transportation projects, including highway,</i>	

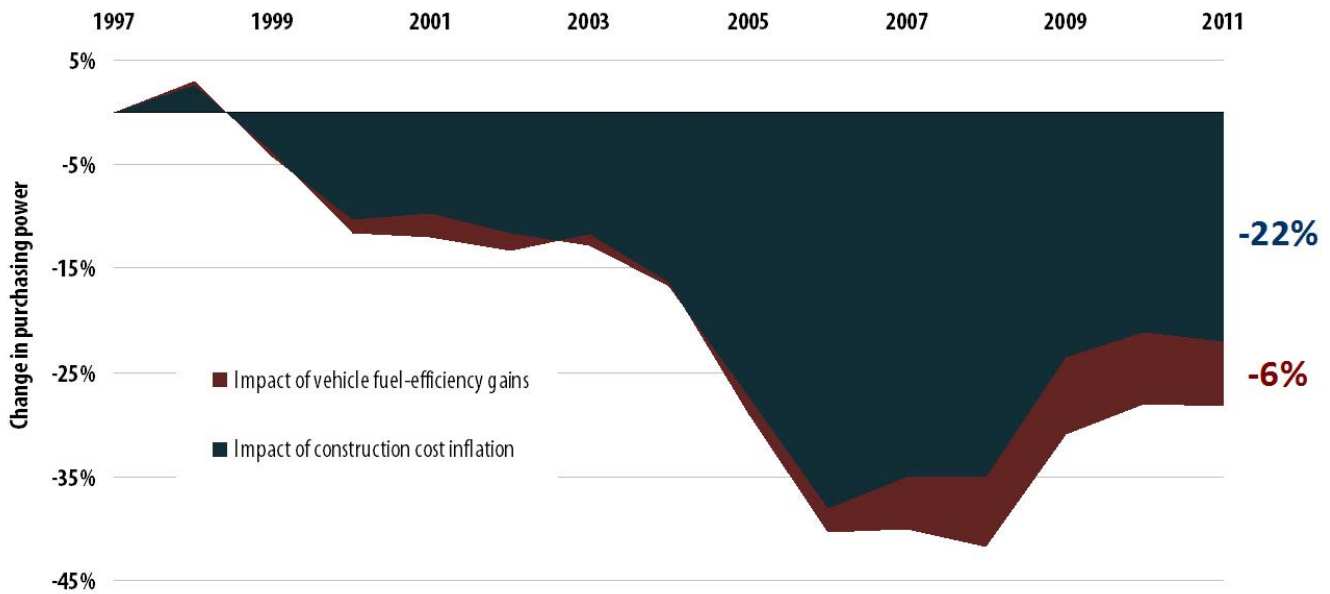
transit, intercity passenger rail, some types of freight rail, and intermodal freight transfer facilities. The program is designed to fill market gaps and leverage substantial private co-investment by providing projects with supplemental or subordinate debt. (MAP-21 §2002; 23 USC 601-609)

**Based on FY 2014 Apportionment*

Fiscal Outlook

Over recent years the call for Congress to address the nation’s transportation funding crisis has continued to grow. As Congress continues to draw from the general fund to fill holes in the Federal Highway Trust Fund, cities and states are now looking inward to find funding solutions for their growing transportation needs. The current funding issues are due in part to the declining purchasing power of the federal gas tax, which has not been increased since 1993. The value of revenue from this source has fallen by more than 40 percent due to inflation and is compounded by drivers buying less gas as fuel efficiency standards for cars and trucks has significantly improved. By 2025, the average car will achieve 54.5 miles per gallon, nearly double that of today’s cars – saving consumers over \$1.7 trillion in gas over the lifetime of a 2025 vehicle, and slashing U.S. oil consumption by 12 billion barrels. These realities are met with similar struggles at the local level, as Tennessee’s state gas tax has not been increased since 1989.

Figure 8-3 Purchasing Power of the Gas Tax, 1997-2011



Source: Institute on Taxation and Economic Policy (ITEP) analysis of data from the Federal Highway Administration

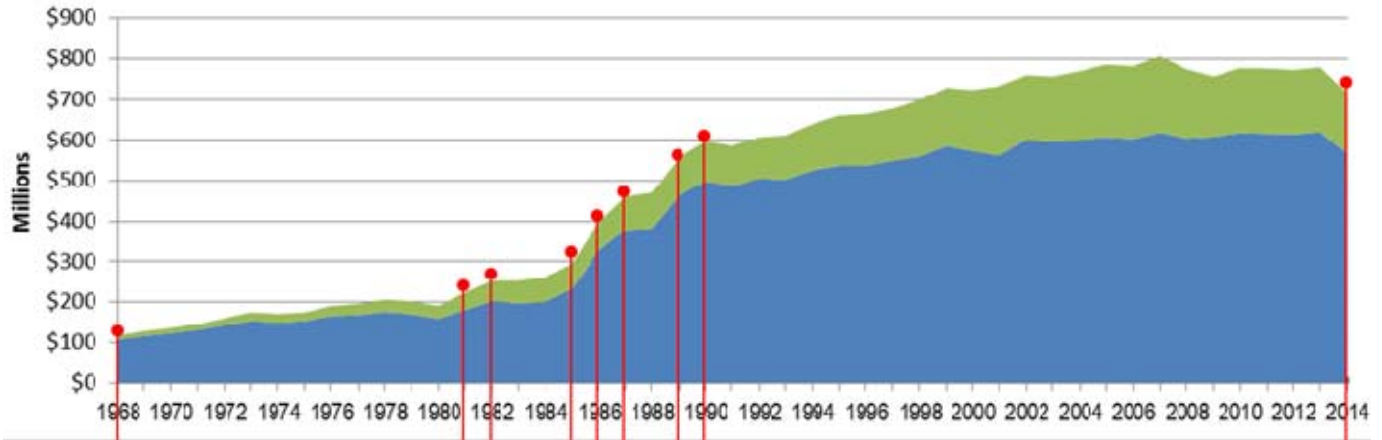
Declining gas tax revenues and buying power means fewer projects, slower progress, and less benefit to communities and economies—thus forcing local governments to find other means to meet funding needs. In the state of Tennessee, TDOT has long operated under a pay-as-you-go policy which has kept the state from going into debt to build or maintain roads. However, as funding dwindles, the policy has pushed the state into a position where funds are used mainly for maintenance of existing facilities with no resources to invest in improvements or expansions to the network.

8.2 State and Local Funding Sources

State Gasoline and Motor Fuels Tax

The State of Tennessee levies a motor fuels tax on top of the federal fuel tax to generate state revenues for the administration and construction of transportation projects. State transportation funds are used for matching funds for federal grant programs, ongoing maintenance and operations of the statewide transportation system, and for state-aid grant programs. Currently, the state’s gasoline tax rate is 21.4 cents per gallon which yields approximately \$642.3 million per year. Of that amount, approximately \$237 million is distributed to cities and counties and \$380 million is retained by TDOT, with the remaining \$25 million being deposited into the State General Fund.

Figure 8-4 State Gasoline and Motor Fuels Tax Collections, 1968-2014



Data Source: Tennessee Department of Revenue

State Gasoline Tax Milestones

1923-1963	TN gasoline tax was implemented in 1923 at 2 cents per gallon, and increased three times to 7 cents per gallon through 1931. A motor fuel tax was implemented in 1941 at 7 cents and increased in 1963 to 8 cents.
1981	Gasoline to 9 cents/ Motor Fuel to 12 cents.
1982	Gasohol tax implemented at 5 cents.
1985	Gasoline to 12 cents/ Gasohol to 8 cents.
1986	Gasoline to 16 cents, Motor Fuel to 14 cents/ Gasohol to 12 cents.
1987	Motor Fuel to 15 cents.
1989	Gasoline to 20 cents, Motor Fuel to 16 cents/ Gasohol to 20 cents.
1990	Motor Fuel to 17 cents.
2014	Today, the total price paid at the pump also includes a Tennessee 1.4 cents special petroleum fee and an 18.4 cent federal gas and a 24.4 cent federal diesel tax, not reflected in the chart above.

Local Sources of Transportation Funding

Local towns, cities, and counties use their respective General Fund as the primary source of funding for operations and maintenance. Some counties have instituted a local wheel tax in addition to the State motor vehicle registration fee to build the general fund. Local jurisdictions also provide funding in full or to match federal or state funds for local transportation projects. Money for capital investments in streets and highways may also come from the sale of bonds.

Locally, the jurisdictions in the MPO area have alternative sources of funding authorized by the state enabling legislation to finance transportation projects. These sources of funding can include toll facilities, rail authorities, local gasoline tax, local motor vehicle taxes and road improvement districts. These sources help to generate a steady flow of funding for transportation improvements. The following describes these options as well as other local funding available to the MPO member jurisdictions.

<i>State Street-Aid Fund</i>	Sections 54-4-103 and 203 of the Tennessee Code Annotated established monthly distributions of a portion of the State's fuel tax revenues to counties and incorporated cities and towns to help improve local streets. For counties, the distribution is based on area size and population. For municipalities, distribution is based on a population proportionate formula.
<i>Property Tax</i>	This is the chief source of local revenue. The funds are distributed to a General Fund and then appropriated for transportation purposes. These taxes are dependent on local economic conditions, although, they remain a steady and reliable source of revenue. A separate tax for transit operations and capital can be administered by voter approval.
<i>Sales Tax</i>	This is one of the most commonly used and the second largest source of local revenue for local jurisdictions in the state. This tax is placed on the sale of consumer goods and services, and purchases by business firms of items for business use. The tax is a function of the tax rate, use of funds and of redistribution formulas. A sales tax is generally more acceptable to citizens than other taxes since the tax is collected in small amounts that are not highly visible to consumers. Sales tax within MPO counties range from a low of 1.00 percent to the state maximum of 2.75 percent.
<i>Wheel Tax</i>	Counties are authorized under Section 5-8-102 of the Tennessee Code Annotated to impose a local motor vehicle tax to provide revenue for county purposes. Imposition of the tax requires a majority vote in public referendum of a two-thirds vote from the county legislators at two consecutive meetings. Revenue potential of the local motor vehicle tax depends on the tax rate, driver sensitivity to price, administrative costs and the number of registered vehicles. The high tax rate may encourage some motorists to register their vehicle in a county that does not have local motor vehicle tax. Administrative costs are likely to be low because local motor vehicle departments are already organized to collect state taxes and fees. A disadvantage of this tax is that the tax revenues do not have to be earmarked for transportation.
<i>Development Impact Fees</i>	In some cases, state law allows local governments the ability to impose fees on private developers according to a locally adopted schedule that is devised to recoup a reasonable share of the costs of necessary transportation improvements along the corridor or general area of proposed development.

8.3 Revenue Projections

Predicting federal funding levels for the near-term is relatively accurate so long as Congress has recently authorized spending for the corresponding time period. In cases where transportation legislation expires or is extended without significant revision, the MPO assumes that revenue levels will stay relatively static until further Congressional action.

Short-term revenue projections are based on FY 2014 federal appropriation levels with a modest 2 percent per year growth rate through the short-term horizon of the plan (2020). TDOT-managed federal funds from the National Highway Performance Program (NHPP) and Surface Transportation Program (STP) were provided by TDOT and generally equal the programmed expenditures for the same period of time. FYs 2016-2020 revenue for MPO-managed federal funding sources (e.g., urban STP, urban Transportation Alternatives, etc.) were added to carry-over balances of unobligated funding from prior years.

Predicting the funding levels for the mid- and long-term horizons is similar to that used for the short-term, but the results come with reduced certainty as laws may change or revenue sources added or deleted. For planning purposes, the mid-term revenues are expected to grow by 4 percent per year; long-term revenues are expected to grow by 6 percent per year. All revenue projections were developed in cooperation with TDOT and local transit agencies.

Figure 8-5 Federal Revenue Projections by Grant Program and Horizon, 2016-2040

Horizon Year	2016-20	2021-30	2031-40	2016-40
<i>Annual Growth Rate</i>	2%	4%	6%	4.4%
National Highway Performance Program (NHPP)	\$567.2	\$1,308.6	\$1,436.7	\$3,312.5
Surface Transportation Program (STP)	\$481.5	\$710.9	\$780.5	\$1,972.9
Direct Suballocation to MPO Area*	\$212.7	\$270.3	\$296.8	\$779.8
MPO Share of Statewide Program	\$268.8	\$440.6	\$483.7	\$1,193.1
Highway Safety Improvement Program (HSIP)*	\$74.7	\$156.3	\$171.6	\$402.5
Congestion Mitigation Air Quality Program (CMAQ)*	\$46.1	\$106.3	\$116.7	\$269.2
Transportation Alternatives Program (TA)	\$27.4	\$59.7	\$65.6	\$152.7
Direct Suballocation to MPO Area	\$6.7	\$15.3	\$16.8	\$38.8
MPO Share of Statewide Program*	\$20.8	\$44.4	\$48.7	\$113.9
Urbanized Area Transit Program (FTA 5307)	\$120.2	\$277.4	\$304.5	\$702.1
Rural Area Transit Program (FTA 5311)	\$9.6	\$22.2	\$24.3	\$56.1
Enhanced Mobility for Seniors & the Disabled (FTA 5310)	\$6.1	\$14.0	\$15.4	\$35.4
Transit State of Good Repair Program (FTA 5337)	\$12.5	\$28.8	\$31.7	\$73.0
Bus and Bus Facilities Program (FTA 5339)	\$8.5	\$19.6	\$21.5	\$49.6
Other Federal Grants (Non-recurring HPP and ITS funds)*	\$7.5	\$0.0	\$0.0	\$7.5
Total Revenue from Federal Formula Programs	\$1,361.2	\$2,703.8	\$2,968.4	\$7,033.4
State Funds (including match)	\$266.8	\$518.1	\$633.6	\$1,418.5
Local Funds (including match)	\$75.9	\$144.2	\$128.3	\$348.4
Total Projected Revenue	\$1,703.9	\$3,366.1	\$3,730.3	\$8,800.3

*Dollars in millions. *The 2016-2020 period includes carryover funding from previous years.*

8.4 Prioritizing Needs for Fiscal Constraint

Although the development of the 2040 RTP unofficially began in 2011 as the MPO began to update regional planning models and growth forecasts to evaluate current and future travel conditions as a result of expected demographic shifts and new development, the official launch of the plan began with a formal call-for-projects in July 2014 to solicit project proposals from MPO member jurisdictions including TDOT, local city and county governments, and public transit agencies. The Call remained open through the end of September 2014. During the Call, MPO members were asked to complete an application and submit a detailed narrative and budget for each project through online software housed at Apply.NashvilleMPO.org. In all, more than 400 projects were submitted by 25 different agencies totaling more than \$9 billion worth of work.

Following the formal call-for-projects period, MPO staff held three rounds of workshops with MPO members to review the project evaluation process, discuss project proposals, and determine local priorities. For each round, one workshop was held in each of the seven counties of the MPO. All workshops were open to the general public and included mayors, county executives, city managers, and representatives from TDOT, transit agencies, local planning departments, local public works departments, local chambers of commerce and economic and community development officials. The following provides a brief recap of each.

- **Round 1, November through December 2014:** Served to create common understanding of the current and future challenges of the regional transportation system and the projects submitted through the call-for-projects. MPO staff reviewed growth and development forecasts, traffic projections, and other key transportation performance issues. The group discussed the RTP policy framework endorsed by the MPO Executive Board on November 4, 2014, and the anticipated fiscal constraints of the plan. Finally, each member jurisdiction shared brief remarks regarding the purpose and need of each project submitted during the call-for-projects.
- **Round 2, May through June 2015:** Focused on the MPO's project evaluation methodology and initial results. More than 400 projects were evaluated and scored during the process. These included roadway capacity and safety projects as well as transit and non-motorized facility improvements.
- **Round 3, August 2015:** Used to discuss fine details of individual projects and big picture initiatives of the RTP including strategies to communicate transportation priorities. The conversation included general discussion about the need for increased federal, state, and local revenue to fund transportation projects, with a specific emphasis placed on the need for dedicated funding to improve transit and to address the long-term high capacity transit needs along the major corridors.

The MPO has developed a priority scoring system to help determine which projects will best facilitate the region's long term vision. The scoring system is based on both federally-defined planning factors and locally developed project evaluation factors. Although the MPO's project evaluation criteria meet the requirements of the federal planning factors, the MPO developed a comprehensive set of factors that were determined to provide the best approach, given the available data, to evaluate projects for their consistency with the MPO's guiding principles, regional goals, and major objectives described in Section 2 of this plan. The following factors were considered in evaluating projects for funding.

- Congestion management,
- Multi-modal accommodations,
- Freight and goods movement,
- Safety and security,
- System preservation,
- Quality growth and sustainable development,
- Economic prosperity,
- Health and environment, and
- State and local support.

Appendix E (MPO Project Evaluation and Scoring) to the plan includes a comprehensive list of MPO evaluation criteria, project scoring weights, and an example of a project information sheet which was compiled to show relevant data and information for each project being considered for funding.

8.5 Scheduled Investments

The 2040 RTP includes a balanced, financially-feasible set of transportation improvements that can be constructed or implemented over the next 25 years with anticipated federal transportation funding. The RTP presents projects over the span of three planning horizons including the short-term (2016-2020), mid-term (2021-2030), and long-term (2031-2040). As discussed in Section 8.4, the MPO worked with TDOT and communities throughout its planning area to prioritize their needs, as the cost of the full set of transportation needs identified within the metropolitan area far outpaces expected revenue.

The following figures provide a summary of the investments approved by the MPO Executive Board for federal funding as it becomes available over the short-, mid-, and long-term horizons of the plan. The first figure presents a summary of the types of projects that have been individually selected by the MPO and itemized by the RTP (a complete list of those projects is included in Appendix A). The second figure summarized programmatic investments of the RTP, meaning that funding has been identified for a specific objective, but that individual projects will be selected at a later time – usually as part of the development of the MPO’s short-range Transportation Improvement Program (TIP), or as scheduled by TDOT. The use of programmatic funding in the MPO’s plan and TIP is consistent with Title 23, Part 450.324(f) of the Code of Federal Regulations which allow the grouping of projects by function, work type, or geography in cases where projects are not an appropriate scale for individual identification.

Figure 8-6 Summary of Itemized Projects by Type

Project Type	Description	2016-2040 Federal Funding
<i>U.S. Interstate System Improvements</i>	The RTP includes funding for new and improved interchanges, additional general purpose lanes, and designated lanes for carpools and transit where appropriate.	<i>\$2.7 Billion</i>
<i>Roadway Capacity Expansion</i>	Though funding for new roadways is extremely limited, the RTP does provide some funding to help extend the roadway network in order to help with street grid connectivity or to provide alternative routing for regional freight movements. In addition, the RTP recommends additional general purpose lanes on interstates, state routes, and other federal-aid streets, incorporating new sidewalks and bicycle lanes where appropriate.	<i>\$3.2 Billion</i>
<i>Fixed-Guideway Transit Projects</i>	Funding to integrate dedicated lanes for transit vehicles (bus or rail) along regional corridors into the Nashville urban core. Corridor alignments may include U.S. Interstates and other freeways, surface arterial streets, and existing rail right-of-way.	<i>\$1.2 Billion</i>
<i>Roadway Reconstructions and Multi-Modal Upgrades</i>	In places where roadway widening was unnecessary or too costly, local governments looked to make modest improvements within the general limits of existing public right-of-way to help alleviate traffic bottlenecks and improve safety. Roadway reconstruction projects typically entail upgrading routes to design standards, improving safety for bicycle and pedestrian users, and adding turn lanes to improve traffic operations.	<i>\$1 Billion</i>

Categories are not mutually exclusive and cannot be summed to a total.

Figure 8-7 Summary of Programmatic Investments

Program	Description	2016-2040 Federal Funding
<i>MPO Transit and Technology Fund</i>	The Transit and Technology Fund is a new initiative of the MPO to use 20 percent of the direct suballocation of STP funds to accelerate the deployment of Intelligent Transportation Systems (ITS) and emerging technologies that improve incident management and traffic operations or provide real-time information about congestion, parking, transit service, and construction activity to the traveling public.	<i>\$132 Million</i>
<i>MPO Active Transportation Program</i>	The 2040 RTP continues this highly popular program created in 2010 with the adoption of the 2035 RTP. In short, the Active Transportation Program receives 10 percent of the MPO’s direct suballocation of STP funding and the full amount of suballocated Transportation Alternatives funding to advance projects that improve walking, bicycling, and transit facilities. The program is coordinated with the MPO’s Bicycle and Pedestrian Advisory Committee whose members help evaluate projects for funding.	<i>\$108 Million</i>
<i>Congestion Mitigation Air Quality (CMAQ)</i>	The CMAQ program was designed to assist non-attainment and maintenance areas in attaining the National Ambient Air Quality Standards for ozone, carbon monoxide (CO), and particulate matter by funding transportation projects and programs that will improve air quality by reducing transportation related emissions. Unless otherwise noted, the CMAQ program will be administered by TDOT.	<i>\$269 Million</i>
<i>Statewide Transportation Alternatives (TA)</i>	In addition to the Transportation Alternatives funding provided through the MPO’s Active Transportation program, TDOT will administer a statewide program aimed at improving walking and bicycling conditions in urban and rural parts of the state.	<i>\$98 Million</i>
<i>Highway Safety Improvement Program (HSIP)</i>	This program is targeted at safety projects and programs across the State of Tennessee. TDOT administers the program through a data-driven process that maximizes opportunities to reduce traffic fatalities and serious injuries on public roadways	<i>\$396 Million</i>
<i>Urban Area Transit Program</i>	The Federal Transit Administration (FTA) Urban Area Transit Program is intended to provide planning, capital, and operating assistance to public transportation providers in urbanized areas. Funds are administered by area transit agencies in coordination with the MPO.	<i>\$702 Million</i>
<i>Rural Area Transit Program</i>	This FTA program is administered by TDOT and is intended to provide planning, capital, and operating assistance to public transportation providers in rural areas.	<i>\$56 Million</i>
<i>Bus and Bus Facilities Program</i>	This FTA program is intended to provide funding for the acquisition and rehabilitation of vehicles and the construction of transit-related facilities for customer service, administration, or fleet maintenance. Funds are administered by area transit agencies in coordination with the MPO.	<i>\$50 Million</i>
<i>Transit State of Good Repair Program</i>	This FTA program is administered by area transit agencies to help maintain dedicated/fixed-guideways used for rail and bus rapid transit service.	<i>\$73 Million</i>
<i>Enhanced Mobility for Seniors/ADA</i>	This FTA program is intended to help expand transportation options for the elderly and individuals with disabilities. Funds are administered by area transit agencies in coordination with the MPO.	<i>\$35 Million</i>

8.6 Summary of Revenue & Expenditures

In all, more than \$8 billion in projects have been identified as part of the cost-feasible plan. The financial tables included in this section compare the estimated revenues and identified project expenditures for each of the plan's horizon years. Though the financial tables may indicate a surplus of funding for some grant programs, the reality is that region's needs for transportation dollars far outpace the available revenues. Any appearance of a surplus exists as a result of the nature of grant programs that seek to identify projects as the funding is appropriated. Such projects must be consistent with the goals and objectives of the regional plan and are typically exempt from air quality conformity analysis.

Accounting for Inflation and Matching Funds

Unless otherwise noted, all project costs reported in the plan are estimated for the expected year of expenditure, meaning that cost estimates include an adjustment to account the annual inflation of prices. For the short-term (2016-2020) planning horizon, project cost estimates submitted by sponsoring agencies were inflated to the expected program year, as near-term inflationary pressures vary drastically by project type and schedule. For the mid-term (2021-2030), and long-term (2031-2040) planning horizons, project cost estimates are inflated by 4 percent per year up to the mid-point of that horizon, or to the year 2025 and 2035, respectively for the mid- and long-term horizons. All inflationary adjustments were developed in cooperation with TDOT and local transit agencies.

The Federal grant programs accounted for in the plan require a 20 percent non-federal match requirement (10 percent for HSIP). The plan assumes that the State or TDOT will provide the required match for NHPP, statewide STP funds, CMAQ, HSIP, statewide TA, and half of the non-federal match requirement for FTA programs. The plan assumes that local agencies will provide the required match for suballocated STP, suballocated TA, and the other half of the non-federal match requirement for FTA programs.

Figure 8-8 Cumulative Balance of Federal Grant Programs through 2020

2020 HORIZON	Revenue	Expenditures	Balance
National Highway Performance Program (NHPP)	\$567.22	\$432.36	\$134.86
Surface Transportation Program (STP)	\$481.5	\$418.8	\$62.69
Direct Suballocation to MPO Area	\$212.69	\$150.01	\$62.69
MPO Share of Statewide Program	\$268.78	\$268.78	\$0.00
Highway Safety Improvement Program (HSIP)	\$74.67	\$74.67	\$0.00
Congestion Mitigation Air Quality Program (CMAQ)	\$46.09	\$46.09	\$0.00
Transportation Alternatives Program (TA)	\$27.44	\$27.44	\$0.00
Direct Suballocation to MPO Area	\$6.65	\$6.65	\$0.00
MPO Share of Statewide Program	\$20.79	\$20.79	\$0.00
Urbanized Area Transit Program (FTA 5307)	\$120.23	\$120.23	\$0.00
Rural Area Transit Program (FTA 5311)	\$9.61	\$9.61	\$0.00
Enhanced Mobility for Seniors & Disabled (FTA 5310)	\$6.06	\$6.06	\$0.00
Transit State of Good Repair Program (FTA 5337)	\$12.50	\$12.50	\$0.00
Bus and Bus Facilities Program (FTA 5339)	\$8.49	\$8.49	\$0.00
Other Federal Grants (Non-recurring)	\$7.46	\$7.46	\$0.00
Total Federal Revenue, Expenditures, and Balance	\$1,361.24	\$1,163.70	\$197.54
State Funds (including match)	\$266.81	\$266.81	\$0.00
Local Funds (including match)	\$75.89	\$75.89	\$0.00
Total Revenue, Expenditures, and Balance	\$1,703.94	\$1,506.40	\$197.54

Includes carry-over balance from current TIP, plus new revenues for 2018-2020. Dollars in millions.

Figure 8-9 Cumulative Balance of Federal Grant Programs through 2030

2030 HORIZON	Revenue	Expenditures	Balance
National Highway Performance Program (NHPP)	\$1,443.47	\$1,232.22	\$211.26
Surface Transportation Program (STP)	\$773.6	\$761.1	\$12.53
Direct Suballocation to MPO Area	\$333.01	\$322.16	\$10.84
MPO Share of Statewide Program	\$440.62	\$438.94	\$1.69
Highway Safety Improvement Program (HSIP)	\$156.28	\$156.28	\$0.00
Congestion Mitigation Air Quality Program (CMAQ)	\$106.34	\$106.34	\$0.00
Transportation Alternatives Program (TA)	\$59.7	\$59.7	\$0.00
Direct Suballocation to MPO Area	\$15.34	\$15.34	\$0.00
MPO Share of Statewide Program	\$44.37	\$44.37	\$0.00
Urbanized Area Transit Program (FTA 5307)	\$277.37	\$277.37	\$0.00
Rural Area Transit Program (FTA 5311)	\$22.16	\$22.16	\$0.00
Enhanced Mobility for Seniors & Disabled (FTA 5310)	\$13.99	\$13.99	\$0.00
Transit State of Good Repair Program (FTA 5337)	\$28.84	\$28.84	\$0.00
Bus and Bus Facilities Program (FTA 5339)	\$19.58	\$19.58	\$0.00
Total Federal Revenue, Expenditures, and Balance	\$2,901.37	\$2,677.59	\$223.79
State Funds (including match)	\$518.07	\$518.07	\$0.00
Local Funds (including match)	\$144.22	\$144.22	\$0.00
Total Revenue, Expenditures, and Balance	\$3,563.66	\$3,339.88	\$223.79

Includes carry-over balance from 2020 horizon plus new revenues for 2021-2030. Dollars in millions.

Figure 8-10 Cumulative Balance of Federal Grant Programs through 2040

2040 HORIZON	Revenue	Expenditures	Balance
National Highway Performance Program (NHPP)	\$1,647.91	\$1,615.11	\$32.80
Surface Transportation Program (STP)	\$793.0	\$776.5	\$16.49
Direct Suballocation to MPO Area	\$307.62	\$297.71	\$9.90
MPO Share of Statewide Program	\$485.42	\$478.84	\$6.58
Highway Safety Improvement Program (HSIP)	\$171.57	\$171.57	\$0.00
Congestion Mitigation Air Quality Program (CMAQ)	\$116.74	\$116.74	\$0.00
Transportation Alternatives Program (TA)	\$65.55	\$65.55	\$0.00
Direct Suballocation to MPO Area	\$16.84	\$16.84	\$0.00
MPO Share of Statewide Program	\$48.71	\$48.71	\$0.00
Urbanized Area Transit Program (FTA 5307)	\$304.51	\$304.51	\$0.00
Rural Area Transit Program (FTA 5311)	\$24.33	\$24.33	\$0.00
Enhanced Mobility for Seniors & Disabled (FTA 5310)	\$15.36	\$15.36	\$0.00
Transit State of Good Repair Program (FTA 5337)	\$31.66	\$31.66	\$0.00
Bus and Bus Facilities Program (FTA 5339)	\$21.50	\$21.50	\$0.00
Total Federal Revenue, Expenditures, and Balance	\$3,192.16	\$3,142.87	\$49.29
State Funds (including match)	\$633.58	\$633.58	\$0.00
Local Funds (including match)	\$128.31	\$128.31	\$0.00
Total Revenue, Expenditures, and Balance	\$3,954.05	\$3,904.76	\$49.29

Includes carry-over balance from 2030 horizon plus new revenues for 2031-2040. Dollars in millions.

8.7 Ongoing Maintenance Costs

In addition to the growth and improvements of the transportation network, the MPO and its members must also ensure the maintenance and efficient operation of the existing roadway and public transit infrastructure. Maintenance activities are those that occur primarily in reaction to situations that have an immediate or imminent adverse impact on the safety or availability of transportation facilities such as pavement resurfacing and markings, bridge repair, guardrail and sign replacement and traffic signal maintenance. Operations may include more routine items such as painting and right of way maintenance.

The varied and complex systems used to maintain the regional transportation network are difficult to quantify and present. Each jurisdiction and agency has unique methods of accounting for these activities. They may also have varying goals and priorities they are seeking to achieve. In order to provide a clearer picture of the efforts undertaken, the MPO will act as a reporting agency for these activities through the region's long range plan and transportation improvement program. The following figure presents the estimated costs incurred by each MPO jurisdictions involved in the operations and maintenance of transportation infrastructure over the life of the plan.

Figure 8-11 Anticipated Funding for Maintenance and Operations, 2016-2040

Jurisdiction/ Agency	Annual Funding	2016-2020	2021-2030	2031-2040	2016-2040
Roadways and Bridges	\$ 120.2	\$ 638.2	\$ 1,378.0	\$ 1,378.0	\$ 3,394.1
Brentwood	\$ 1.8	\$ 9.6	\$ 20.6	\$ 20.6	\$ 50.8
Columbia	\$ 0.5	\$ 2.7	\$ 5.7	\$ 5.7	\$ 14.1
Fairview	\$ 0.3	\$ 1.6	\$ 3.4	\$ 3.4	\$ 8.5
Franklin	\$ 1.5	\$ 8.0	\$ 17.2	\$ 17.2	\$ 42.4
Gallatin	\$ 0.7	\$ 3.5	\$ 7.5	\$ 7.5	\$ 18.4
Goodlettsville	\$ 0.6	\$ 2.9	\$ 6.3	\$ 6.3	\$ 15.5
Hendersonville	\$ 0.8	\$ 4.2	\$ 9.2	\$ 9.2	\$ 22.6
La Vergne	\$ 0.9	\$ 4.8	\$ 10.3	\$ 10.3	\$ 25.4
Lebanon	\$ 1.2	\$ 6.4	\$ 13.8	\$ 13.8	\$ 33.9
Metro Nashville-Davidson County	\$ 49.0	\$ 260.1	\$ 561.7	\$ 561.7	\$ 1,383.6
Millersville	\$ 0.3	\$ 1.6	\$ 3.4	\$ 3.4	\$ 8.5
Mt. Juliet	\$ 0.4	\$ 2.1	\$ 4.6	\$ 4.6	\$ 11.3
Murfreesboro	\$ 4.2	\$ 22.3	\$ 48.1	\$ 48.1	\$ 118.6
Portland	\$ 1.1	\$ 5.8	\$ 12.6	\$ 12.6	\$ 31.1
Rutherford County	\$ 9.8	\$ 52.0	\$ 112.3	\$ 112.3	\$ 276.7
Smyrna	\$ 1.1	\$ 5.8	\$ 12.6	\$ 12.6	\$ 31.1
Spring Hill	\$ 0.5	\$ 2.7	\$ 5.7	\$ 5.7	\$ 14.1
Springfield	\$ 2.0	\$ 10.6	\$ 22.9	\$ 22.9	\$ 56.5
Sumner County	\$ 3.2	\$ 17.0	\$ 36.7	\$ 36.7	\$ 90.4
Tennessee Dept. of Transportation	\$ 22.0	\$ 116.8	\$ 252.2	\$ 252.2	\$ 621.2
White House	\$ 0.9	\$ 4.8	\$ 10.3	\$ 10.3	\$ 25.4
Williamson County	\$ 10.9	\$ 57.9	\$ 125.0	\$ 125.0	\$ 307.8
Wilson County	\$ 6.6	\$ 35.0	\$ 75.7	\$ 75.7	\$ 186.4
Public Transit System	\$ 52.4	\$ 278.2	\$ 600.7	\$ 600.7	\$ 1,479.6
Franklin Transit Authority	\$ 1.2	\$ 6.4	\$ 13.8	\$ 13.8	\$ 33.9
Murfreesboro Rover	\$ 1.1	\$ 5.8	\$ 12.6	\$ 12.6	\$ 31.1
Nashville MTA	\$ 40.1	\$ 212.9	\$ 459.7	\$ 459.7	\$ 1,132.3
Regional Transportation Authority	\$ 3.0	\$ 15.9	\$ 34.4	\$ 34.4	\$ 84.7
Tennessee Dept. of Transportation	\$ 7.0	\$ 37.2	\$ 80.2	\$ 80.2	\$ 197.7

Annual Funding Estimate based on recent local annual budgets. Dollars presented in Millions.

8.8 Additional Funding Options

The current methods of funding transportation projects are in need of some assistance as the purchasing power of traditional transportation revenue sources dwindles. With recent increases in construction costs outpacing inflation - coupled with the decrease in the Highway Trust Fund balance, the Middle Tennessee Region - as well as the rest of the nation - needs to explore new and creative ways of financing transportation projects. A brief overview of some of the more popular options follows.

State or Federal Alternatives to Gasoline Tax or New Options

<i>Indexing Gasoline Tax to Inflation or Conversion to Sales Tax</i>	One of the fundamental flaws of the gasoline tax is that it is currently levied at a static per gallon rate. Since the amount of revenue generated does not increase with the price of gasoline, the tax is not able to sustain its value over the long-term due to inflation. One solution could be to index the per gallon rate to inflation so that it automatically increases over time, or to convert all or portions of the tax to a sales tax. This option would likely require a “floor” and a “ceiling” to protect transportation revenue should gasoline prices drop below current levels, and the consumer should prices grow too rapidly.
<i>Distance-Based or Vehicle Miles Travelled Tax</i>	Taxing gasoline will not be a viable option as hybrid and electric vehicles grow in market share. Instead of relying on fuel consumption to generate revenue, a distance-based tax would make it possible for users to pay for their amount of travel. This type of fee could be calculated using existing technology including odometers. With Global Positioning System (GPS) technology, the rate could vary by route, time-of-day, or congestion levels. This type of “congestion” pricing has been shown in other metro areas to help manage traffic levels on roadways.
<i>Tolling & Congestion Pricing</i>	Some states and regional authorities charge tolls on roadways that help generate revenue for maintenance, and in some cases to pay for construction. Tolling typically is used on new roadways, but can also be implemented along existing routes with the most common application being the conversion of HOV lanes to toll lanes.

Local sources that could be tapped for Transportation

<i>Special Assessment Districts</i>	Special Assessment Districts are designated areas within which commercial and residential property is assessed a charge sufficient to defray the costs of capital improvements that benefit the property within the district. Transportation Development Districts (TDDs) are one example of these districts used to finance transportation improvements. The TDD has the power to issue bonds to pay for construction that can benefit the area instead of waiting for the local jurisdiction to fund the project. These districts work best in small, fast growing suburban areas where the tax base is low and the tax rate is high.
<i>Local Option Gasoline Taxes</i>	Counties, municipalities and metropolitan governments are authorized under Section 67-3-101 to 67-3-1013 of the Tennessee Code Annotated to impose a local gasoline tax to support local public transportation services. Imposition of the tax requires a majority vote in public referendum. The tax revenue depends on tax rate, driver sensitivity to price, administrative costs, population, and real travel patterns. The Tennessee Gasoline Tax is 21.4 cents per gallon. That yields approximately \$642.3 million per year of which TDOT collects about \$380.1 million (or 12.7 cents per gallon).
<i>Sales Tax</i>	This is one of the most commonly used and the second largest source of local revenue for local jurisdictions in the state. This tax is placed on the sale of consumer goods and services, and purchases by business firms of items for business use. The tax is a function of the tax rate, use of funds and of redistribution formulas. Sales tax within MPO counties ranges from a low of 1.00 percent to the state maximum of 2.75 percent.

<i>Wheel Tax</i>	Counties are authorized under Section 5-8-102 of the Tennessee Code Annotated to impose a local motor vehicle tax to provide revenue for county purposes. Imposition of the tax requires a majority vote in public referendum of a two-thirds vote from the county legislators at two consecutive meetings. Revenue potential of the local motor vehicle tax depends on the tax rate, driver sensitivity to price, administrative costs and the number of registered vehicles. A disadvantage of this tax is that the tax revenues do not have to be earmarked for transportation.
<i>Impact and Utility Fees</i>	This one-time fee is imposed by local governments on new developments to help pay for the capital facilities, mainly extending utilities and putting in traffic enhancements and transit facilities that serve it. A fee is typically assessed on a square footage of the planned development and in some cases the granting of a building permit is made contingent on payment of the fee. To implement this impact fee, it must be demonstrated that 1) improvements are necessary and are caused by the new development, 2) each developer is being charged a fair share of the cost of the improvements, and 3) funds to be collected are being used in close proximity to the new development and for the intended purposes only. These fees are enacted by the local ordinance and are usually favorable because the new development is creating these development needs. The upper limit on impact fees is around 3 percent of project value, however, enforcing and administering this fee is burdensome to the local government.
<i>Bond Financing</i>	Bond financing helps local government pay for projects by establishing a type of payment plan that allows capital costs to be spread out over a number of years.
<i>Public Private Partnerships</i>	Public-private partnerships are cooperative agreements between the public and private sectors in which the private sector has the option to share in the design, delivery, operation, or maintenance of certain transportation projects. These partnerships allow the public sector to transfer some risk to the private sector and also allows the private sector to share in the proposed revenue or other incentive. There are many forms of public-private partnerships ranging from simple design-build contracts, where the public sector hires a single contractor to design and build a facility, to the most complex partnership, like a Design/Build/Finance/Operate, where the public sector privatizes nearly every aspect associated with a transportation facility to the highest bidding and/or most qualified private company.
<i>Other Taxes</i>	Other taxes that can be used to generate revenue include payroll tax, income tax, severance tax, driver's license fees, and a parking tax. The payroll, income, and parking tax are used in relatively few states but can offer a small additional revenue source. The severance tax can be imposed on resources extracting industries such as oil, gas, coal, or other natural products. This tax is used to help pay for the cost of providing roads to these industries. The driver's license fee has limited revenue potential but it does offer a stable source of money.

Local or Regional Dedicated Funding for Public Transit

What do places like Denver, Seattle, Austin, and Charlotte have in common with places like Kalamazoo (MI), Missoula (MT), and Lakeland (FL)? They all have a portion of local taxes dedicated specifically to public transit. In fact, the Nashville area is one of the largest communities in the entire nation without a single cent dedicated to transit; and is a long list of communities much smaller that have had dedicated funding for decades. While the exact source of revenue varies based on the unique circumstances of each jurisdiction, the most common types are sales tax, property tax, development impact fees, fuel tax, and the wheel tax.

In the Nashville area, local public funding for transit projects and services comes from the general funds of contributing cities and counties. As such, funding for transit is determined annually through the local budgeting process which limits opportunities for expanding the Nashville MTA, RTA, or other transit offerings. Moreover, this uncertainty in funding makes it difficult to compete for large federal grants or finance long-term capital investments.

There are no specific proposals in Middle Tennessee to dedicate tax revenue to transit at this time, but such a proposition may need to be considered by area voters or local governing bodies at some point in the future. In 2009, the Tennessee General Assembly passed legislation empowering metropolitan areas across the state to lay the groundwork for dedicated funding to implement regional transit plans.

The Center for Transportation Excellence tracks transportation-related ballot initiatives around the United States. Based on their research, more than 7 out of every 10 transportation-related ballot measures have been successful since 2000 - including 73 percent of elections held in 2013.

Locally, the Transit Alliance of Middle Tennessee was forged in 2009 by the members of the business community to ensure that the region was doing what it could to identify funding to pay for the regional transit vision. Without such investment, Middle Tennessee stands to lose ground on economic competitors like Austin, Charlotte, and Denver.

What is Dedicated Funding?

First and foremost, dedicated funding means providing a reliable source of annual revenues that provides support to transit operations and capital costs. It does not necessarily mean “new” or “increased” funding, but the expansion of existing transit service will necessitate new revenue.

Revenues, which can be implemented in a variety of ways, are established on the front-end, by a legislative body or by the voters, to be dedicated for transit without being subject to the same kind of annual political budgeting process that general fund revenues undergo. This approach reduces the burden placed on local governments to find funding for public transportation and minimizes the uncertainty for public transit customers, operators, and the business community looking to invest along fixed transit routes.