

2. Financial Reality

Introduction

Funding improvements to the region’s multimodal transportation system is a complex undertaking. Federal regulations require Metropolitan Transportation Plans be financially constrained to available resources. Projects and programs may only be included in the long-range plan if funding can be identified for their implementation. In other words, this plan only programs the amount of money it can reasonably expect to receive.

In addition to the requirement of financial constraint, the Metropolitan Transportation Plan must report financial information for total project costs and must use year-of-expenditure dollars to more accurately reflect the true cost of implementing programs and projects over time. Financial information in the Mobility 2045 Update is adjusted for inflation and represents year-of-expenditure costs for the total project unless otherwise noted.

This financial plan considers general economic conditions, as well as regional needs, over the planning horizon. Nationwide, traditional federal and state revenues are declining because of inflation, rising construction costs, and increasing fuel efficiency. Locally, the Regional Transportation Council continues to take a leadership role in leveraging funds and pursuing sustainable long-term solutions for funding our region’s transportation system.

In This Chapter:

- Financial policies
- The financial planning process
- Regional revenue and expenditure estimates
- Long-term funding issues and solutions

TRANSPORTATION FUNDING AT-A-GLANCE

Four documents are important for funding transportation projects:

Metropolitan Transportation Plan



The Metropolitan Transportation Plan is a long-range planning document that acts like a budget. It serves as a guide for the projects and programs the region would like to implement over the life of the Metropolitan Transportation Plan. It also identifies potential ways in which the desired improvements could be funded. The 10-Year Plan identifies project staging during the first 10 years of the Metropolitan Transportation Plan.

Transportation Improvement Program



The Transportation Improvement Program is a near-term planning document that acts like a checking account. It lists the specific projects that will be programmed for funding, typically within the next two to four years. For a project to be implemented, it must be in both the Metropolitan Transportation Plan and the Transportation Improvement Program.

10-Year Plan



The 10-Year Plan is required by House Bill (HB) 20, passed by the Texas Legislature in 2015. This legislation also mandates that the state and Metropolitan Planning Organizations utilize performance-based planning and project selection and develop criteria to consider congestion, safety, economic development, available funding, air quality, and socioeconomic effects.

Unified Transportation Program



The Unified Transportation Program is a 10-year statewide programming document updated and adopted yearly by the Texas Transportation Commission. It lists funding for projects and programs over a 10-year time frame for the entire state and is used to develop funding estimates for the North Central Texas region.

Mobility 2045 Update Supported Goals

Pursue long-term sustainable revenue sources to address regional transportation system needs.

Provide for timely project planning and implementation.

Develop cost-effective projects and programs aimed at reducing the costs associated with constructing, operating, and maintaining the regional transportation system.

Mobility 2045 Update Policies

Policies represent an important part of the planning process as they often set the tone for project or program development and delivery. The following policies are broad and meant to guide the financial aspects of transportation planning. These policies are not intended to address the specific allocation of funds or funding for individual projects and programs.

F3-001: The Regional Transportation Council will select and program projects within the guidelines established by the funding source. Programming and selection guidelines for Regional Transportation Council Local funds are determined by the Regional Transportation Council.

F3-002: Incorporate sustainability and livability options during the project selection process. Include additional weighting or emphasis as appropriate and consistent with Regional Transportation Council policy objectives, including, but not limited to, demand management, air quality, natural environment preservation, social equity, or consideration of transportation options and accessibility to other modes (freight, aviation, bicycle, and pedestrian).

F3-003: Ensure adequate funding for multimodal elements within implemented projects.

F3-004: Utilize project staging and phasing of Metropolitan Transportation Plan recommendations to maximize funding availability and cash flow.

F3-005: Ensure that adequate funding is given to maintenance and operations of the existing multimodal transportation system consistent with federal and/or state guidelines and recommendations.

F3-006: Pursue roadway and transit pricing opportunities to expedite project delivery.

F3-007: Pursue project cost reductions through value engineering, streamlined project development, and other activities.

F3-008: Pursue an increase in North Central Texas' share of state and federal allocated funds consistent with the Regional Transportation Council's legislative position.

F3-009: Pursue legislative actions aimed at increasing revenue through initiatives identified by the Regional Transportation Council.

F3-010: Leverage traditional and non-traditional transportation funding to expand services across the region.

F3-011: Utilize multiple funding sources, including innovative funding methods, as appropriate to fully fund projects.

F3-012: Support planning activities, including studies, data collection, surveys, and analyses to advance transportation policies, programs, and projects.

Financial Planning Process

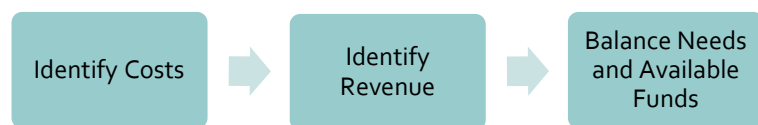
This section outlines the methodology used to financially constrain the MTP (Metropolitan Transportation Plan). In the financial planning process, recommendations are first developed based on the goals of the MTP, and costs to implement the recommendations are estimated and summed. Next, revenue sources are identified and

projected through the plan horizon year of 2045. Revenues are then allocated to recommendations as allowed by constraints on those revenues. Revenues are then compared to projected expenditures. When expenditures do not exceed available revenue, the MTP is financially constrained.

This plan also analyzes funding allocations to assess whether they create an appropriate level of service. In other words, the last part of the financial planning process is to adjust funding for the different categories to reflect the goals and policies outlined in the MTP. It is important to note that some sources of revenue for transportation improvements can only be spent on specified modes of transportation such as roadways or rail.

Exhibit 2-1 is an overview of the financial planning process for the Mobility 2045 Update. A more detailed description of the financial constraint process can be found in the **Financial Reality** appendix.

Exhibit 2-1: Financial Planning Process



Performance Measures

In order to monitor progress towards the Mobility 2045 Update goal of pursuing sustainable revenue sources, two performance measures are being tracked: plan revenue per capita per year, and percentage of plan funded by revenue enhancements.

Plan Revenue Per Capita Per Year

Mobility 2045 Update's demographic forecasts call for continued significant growth in the region's population through 2045, reflected in the plan's objective to maintain a level of anticipated funding

sufficient to meet that growth. The Mobility 2045 Update quantifies the total forecasted plan revenue per capita per year at \$590.68, or \$49.22 per person per month through the year 2045. In contrast, the average monthly phone bill was \$127.37 in 2020,¹ making the 20+ year investment in the regional transportation system a relative bargain. Even streaming services cost more on average than the plan per capita expenditure, at \$55 per month.² This comparison helps demonstrate the benefits of having around-the-clock access to a robust transportation system connecting people to jobs, education, healthcare, and other life opportunities, and put into perspective its cost.

Percentage of Plan Funded by Revenue Enhancements

The Mobility Plan Update identifies a variety of funding sources, including traditional fuel taxes, tolls, local revenue, sales taxes, and many others. Some of these sources are assumed revenue enhancements that involve future action by committees, legislators, or voters that may occur in the future. These future sources are estimated as equivalent to amounts projected from increases to revenue sources that exist today, like motor fuel taxes and registration fees.

A Metropolitan Transportation Plan is in a stronger financial position if it relies less on these enhancements to fund its recommendations. As sources of revenue materialize and start to flow through established channels, revenue enhancements are adjusted each mobility plan, according to changes in financial condition. For the Mobility Plan Update, about 5 percent of plan revenue is derived from revenue enhancements, the lowest percentage since Mobility 2030. This is due to the fact that anticipated future revenues in previous plans have materialized and begun flowing through established funding channels like the State Highway Fund and Unified Transportation Program. For more information about these

¹ CNBC, referencing a JD Power study, 2021: [How to save money on your phone bill \(cnbc.com\)](https://www.cnbc.com)

² JD Power survey, 2021: [Despite Return to Normal, People Spending More Time and Money on Streaming Services Now than During Height of Pandemic | J.D. Power \(jdpower.com\)](https://www.jd.com)

and other performance measures, see the **Regional Performance** chapter.

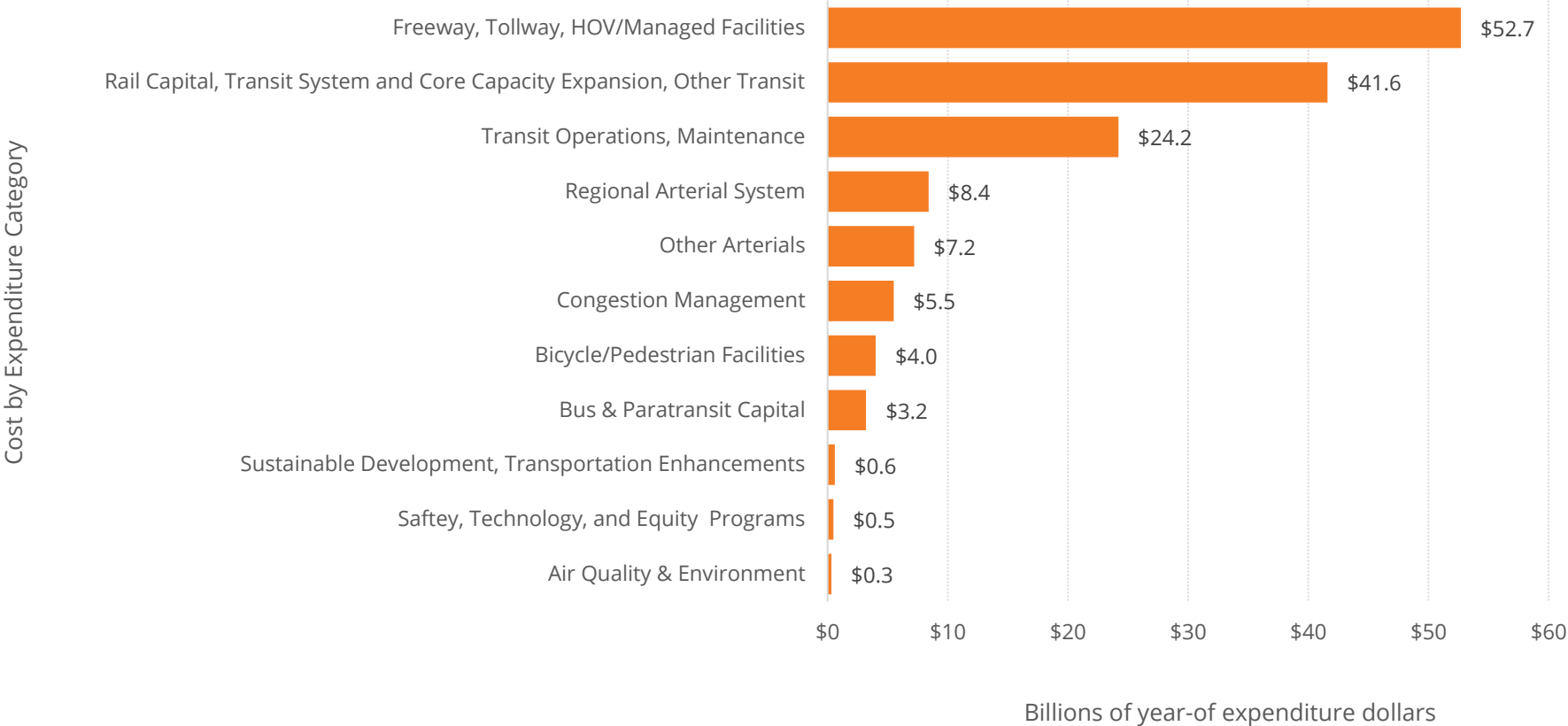
Mobility 2045 Update Revenue and Expenditure Estimates

Costs

The costs for individual projects and programs were estimated in two ways. Direct costs for known individual projects were provided by the

projects’ implementing agencies. If direct costs were not available, unit costs were used to calculate total project costs. All costs are presented in year-of-expenditure dollars and represent the total cost associated with each project. Costs for recommended programs and project categories are reported in **Exhibit 2-2**. Once all costs are estimated and summed, they are matched with an available revenue source. Balanced revenues and expenditures are reported in **Exhibit 2-5**.

Exhibit 2-2: Mobility 2045 Update Costs by Category



Revenues

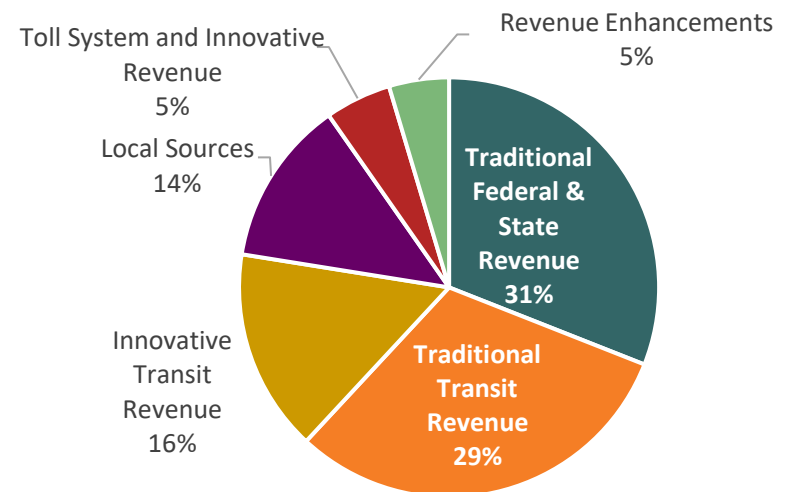
Several revenue sources are available to build and maintain the multimodal transportation system; however, many revenue streams are restricted to certain uses. This means only particular types of improvements can be funded with a given source. Additional detail about specific funding sources can be found in the **Financial Reality** appendix.

Funds available for implementing projects and programs are estimated using financial forecasting models. Because the future is anything but certain, looking to the past is a good start for determining how much revenue the region can reasonably expect. The financial models used by the North Central Texas Council of Governments track and project revenue based on historical trends and anticipated future growth. The Mobility 2045 Update accounts for recent increases in federal funding and assumes additional state transportation revenue approved by voters as Proposition 1 and Proposition 7 in recent years will continue until 2045. The financial forecasts in the Mobility 2045 Update include the following sources:

- Federal and state motor fuel taxes
- State vehicle registration revenues
- Other federal and state taxes
- New or additional state and federal funding, such as from federal transportation legislation
- Revenue from the region's toll and managed lane system
- Local funds, including local bonds for regional transportation projects
- Sales tax collected by transit authorities
- Proposition 1 funds
- Proposition 7 funds
- Other reasonably expected future sources

As seen in **Exhibit 2-3**, the greatest funding source for roadway projects is traditional state and federal sources, which come from motor fuel taxes and vehicle registration fees. Other revenue sources include toll user fees, state and local bond programs, and local governments' general funds or capital improvement funds. Transit in the region is largely funded by sales taxes that are collected within a transit authority's service area. Other transportation improvements like bicycle/pedestrian facilities and congestion management tools can also be funded through these sources. As will be discussed later in this chapter, traditional federal and state revenues are projected to be lower in the future because of inflation and increasing fuel efficiency of vehicles.

Exhibit 2-3: Mobility 2045 Update Revenue Sources



Mobility 2045 Update Financial Plan Summary

After evaluating historic trends, the current state of transportation funding, and the plausibility of future funding, a revenue estimate of \$148 billion was developed for the Mobility 2045 Update. **Exhibit 2-4** summarizes the major expenditure categories where revenue is

anticipated to be spent to implement the Mobility 2045 Update recommendations. Expenditures are listed in the order set by the goals and policies of the Mobility 2045 Update. Note that the priority of each category does not necessarily correspond to a higher or lower funding amount. This is because some high-priority improvements, such as management of the system, may have a relatively low cost. Additionally, some revenue sources are restricted to certain uses, like road or rail.

Exhibit 2-4: Major Expenditures

Mobility 2045 Update Planning Approach	
Infrastructure Maintenance*	\$42.8
Management and Operations	\$9.6
Growth, Development, and Land Use Strategies	\$1.5
Rail and Bus**	\$44.9
HOV/Managed Lanes + Freeways/Tollways and Arterials	\$49.5
Total, Actual \$, Billions	\$148.3

Values may not sum due to independent rounding

*Includes transit system maintenance

**Transit capital expenditures, including those using innovative revenue sources such as public-private partnerships

The financial plan is largely dependent on national, state, and local funding policies, and the estimates prepared for the Mobility 2045 Update are based on funding sources that can reasonably be expected to be available for transportation uses. The following financial assumptions are utilized in the Mobility 2045 Update:

- Proposition 1 and Proposition 7 funds will be available through the MTP horizon year of 2045.
- The diversion of funds from the State Highway Fund, except those funds constitutionally protected for education, has ended and those funds will remain available through 2045.

- There will be additional revenue in amounts equivalent to the federal fuel tax increasing by \$.05 in 2032.
- There will be additional revenue in amounts equivalent to the state fuel tax increasing by \$.07 in 2032.
- Starting in 2028, there will be additional revenues in amounts equivalent to a \$10 local option vehicle registration or mobility fee that will be assessed within the 12-county Metropolitan Planning Area boundary. An additional \$10 increase will be assessed beginning in 2032.
- As with previous plans, there is still a reliance on tolls and private sector partnerships to fund appropriate projects in certain corridors and areas.
- Over the life of the MTP, regional transportation partners will continue to implement projects.
- There will be an increasing need to balance public and private sector funding, including determining reduction of public sector risk when appropriate.
- The region will continue to leverage funds in order to implement programs and projects.

To read the revenue and expenditure chart (**Exhibit 2-5**), revenues are located in the first column, while expenditures are located in the top row. Funding is allocated across each line into the expenditure categories and is balanced to indicate financial constraint is achieved. In other words, revenues match expenditures, showing the Mobility 2045 Update only includes projects and programs for which there is funding.

Exhibit 2-5: Total Mobility Plan Revenues and Expenditures

Mobility 2045 Update Revenue and Expenditures <i>All values in millions Values may not sum due to independent rounding</i>	Strategic Programs					Roadway Maintenance, Operations, Rehabilitation, and Expansion			Transit Maintenance, Operations, and Expansion			Total
	Safety, Technology, and Equity Programs	Air Quality and Environment	Bicycle/ Pedestrian Facilities	Sustainable Development and Transportation Enhancements	Congestion Management	Freeway, Tollway, HOV/Managed Facilities	Regional Arterial System	Other Arterials	Transit Operations, Maintenance	Rail Capital, Transit System and Core Capacity Expansion, Other Transit Capital	Bus and Paratransit Capital	
Traditional Federal & State Revenue												\$45,980.2
Category 12						\$9,987.0	\$637.5					\$10,624.5
Category 2						\$1,758.4	\$439.6					\$2,198.0
Category 7		\$127.2	\$212.0		\$1,060.2	\$2,629.3	\$212.0					\$4,240.8
Category 5		\$195.7	\$727.3		\$1,153.7	\$426.4	\$4.9					\$2,508.0
Federal Infrastructure Investment and Jobs Act						\$3,375.8	\$375.1					\$3,750.8
Federal Competitive Grants						\$458.8						\$458.8
TERP Funds					\$1,226.3	\$1,226.3						\$2,452.6
Other TxDOT/Federal	\$432.5			\$239.5		\$18,458.1	\$616.7					\$19,746.7
Local Revenue												\$20,636.6
Local Funds			\$2,678.3	\$316.5	\$1,584.1	\$854.1	\$5,190.3	\$6,378.5				\$17,001.8
Local Match Funds	\$48.4		\$100.5	\$124.1	\$347.4	\$2,783.8	\$230.7					\$3,634.8
System Revenue												\$7,910.3
Toll Revenue						\$6,910.3						\$6,910.3
Surplus Managed Lane Toll Revenue						\$1,000.0						\$1,000.0
Transit Revenue												\$66,907.0
Transit Sales Tax						\$24.2			\$15,680.7	\$2,704.7	\$867.7	\$19,277.3
FTA 5307									\$2,240.8		\$535.3	\$2,776.1
FTA 5309										\$962.5		\$962.5
Transit CMAQ Funds										\$174.9	\$8.0	\$182.9
Future Transit Federal Grant Funds										\$9,210.5	\$161.5	\$9,372.0
Local Transit Funding											\$92.5	\$92.5
Transit Public Private Partnership										\$23,167.2		\$23,167.2
Other Transit			\$12.5						\$6,296.1	\$3,185.0	\$1,582.9	\$11,076.5
Revenue Enhancements												\$6,857.9
Federal/State Revenue Enhancements			\$276.9		\$184.6	\$3,553.2	\$599.9					\$4,614.6
Local Option Vehicle Registration										\$2,243.3		\$2,243.3
Total Cost	\$480.8	\$322.9	\$4,007.5	\$680.0	\$5,556.3	\$53,445.4	\$8,306.7	\$6,378.5	\$24,217.6	\$41,648.1	\$3,247.9	\$148,292.1

Revenue Initiatives

Demonstrating financial constraint does not bind the Mobility 2045 Update to any specific strategy to generate revenue. The financial assumptions contained within the Mobility 2045 Update are merely an example of what could reasonably be expected to happen in the future. This allows a more flexible approach to financial planning. However, while flexible, it increases the burden on the RTC (Regional Transportation Council) to monitor the financial situation of the plan on a regular basis and to adjust accordingly. This is particularly true for traditional transportation funding sources like motor fuel taxes, which are anticipated to stagnate over time despite increasing need. The RTC will continue to monitor state and federal initiatives regarding replacements for revenues from fuel taxes. The RTC will also encourage the development of alternative funding options. In addition to the RTC's current legislative program, it is proposed that the following strategies be acted upon to ensure projected revenue are realized:

- Continue Regional Transportation Council/Texas Transportation Commission Partnership Program to leverage available funding.
- Utilize innovative project financing using tools made available by the State Legislature, when appropriate.
- Decrease project costs through value engineering and project development streamlining.
- Continue to pursue legislative actions aimed at increasing revenue through additional initiatives identified by the RTC.
- Continue to pursue the region's fair share of transportation revenues.
- Explore alternatives to the motor fuel tax structure such as mileage-based fees or electric and hybrid vehicle fees.

³ The North Central Texas Council of Governments modeled the costs to improve all roadway facilities with a level-of-service of F, as well as operations and maintenance costs, non-capacity

Did You Know?



Current state fuel taxes are 20¢ per gallon and have not increased since 1991.



Federal fuel taxes are 18.4¢ per gallon for gasoline and 24.4¢ for diesel and have not increased since 1993.



State and federal fuel taxes are assessed on a per-gallon basis. This means that no matter how much fuel costs, you are always paying the same 38.4¢ of tax for each gallon.

The Region's Financial Reality

The Metropolitan Planning Organization recognizes the region's transportation needs far exceed the ability to pay for the improvements. Likewise, federal planning regulations require financial constraint be exercised in the MTP. It is estimated the North Central Texas region would need approximately \$337 billion to eliminate the worst levels of congestion.³ The Mobility 2045 Update identifies approximately \$148 billion in resources to fund transportation improvements in the region through the year 2045; about \$68 billion of these resources address roadway project needs. This represents an approximate shortfall of \$269 billion for roadway projects alone.

The Mobility 2045 Update does not represent a wish list of transportation improvements, but instead is an inventory of the most needed projects and programs that best meet the region's transportation goals within available funding constraints. Despite the \$148 billion in transportation improvements identified in the MTP

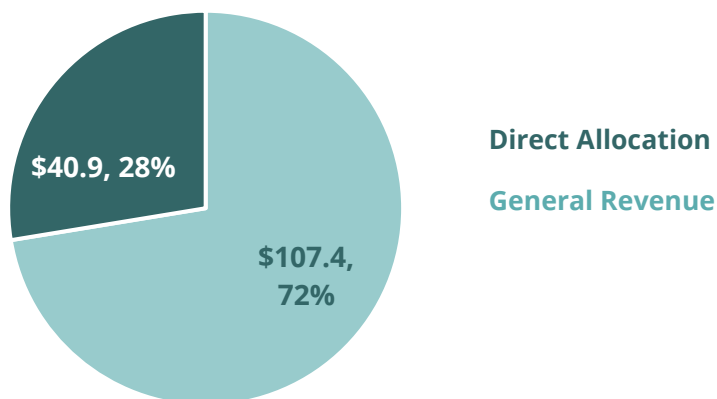
improvement needs, and inflation. Combined, this represents the total cost of eliminating the worst levels of congestion in the region by 2045.

and increased revenue from legislative action in recent years, by 2045, the region will continue to fall substantially behind in its ability to keep pace with a growing population and the resulting congestion. Additional resources will be needed in the future to address the region's growing transportation needs.

Direct Allocation Revenue

As shown in **Exhibit 2-6**, approximately 30 percent of funds are dedicated to specific projects, often due to the use of innovative funding methods used. This breakout demonstrates the impact of important financial planning and policy activities undertaken by the RTC, with a notable example being the Dallas-Fort Worth High-Speed Rail project. If not for these types of projects, the total plan would be reduced to about \$106 billion from the \$148 billion currently funding the plan. In other words, should these particular projects funded by direct allocation methods not advance to implementation, that revenue is not available for other projects within the plan and would be considered a lost opportunity.

Exhibit 2-6: Funding Dedicated to Specific Projects



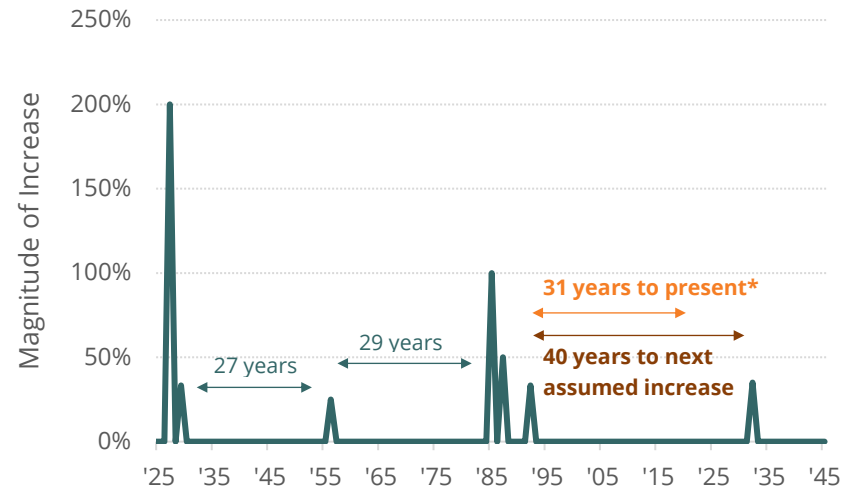
Source: NCTCOG Mobility 2045

Resources at Risk

Federal and state revenues, mostly funded by motor fuel taxes, are at significant risk of decline in the long term due to price stagnation, inflation and rising costs, and increased efficiency of travel due to newer technology.

The majority of transportation investment has historically been funded through federal and state motor fuel taxes. However, federal tax rates have not increased since 1993, and state tax rates have not increased since 1991, as demonstrated in **Exhibit 2-7**.

Exhibit 2-7: Instances and Magnitude of Texas Fuel Tax Rate Change



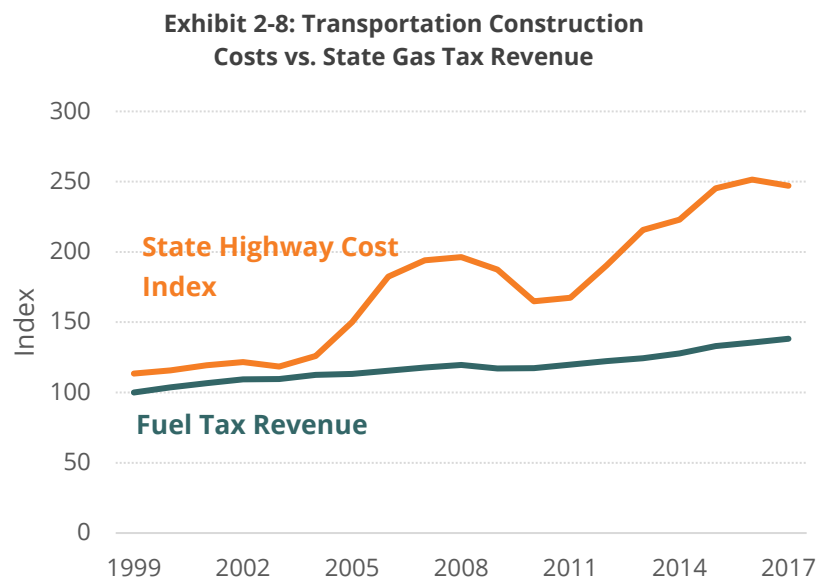
*Present is Mobility 2045 Update base network year of 2023. Assumed increase described in Revenue Enhancements is in 2032.

Source: Texas Comptroller of Public Accounts, NCTCOG Mobility 2045

In the meantime, construction costs and inflation have reduced the purchasing power of the gas tax; the 1993 state gas tax of \$0.20 per gallon would need to be \$0.42 in 2023 just to keep pace with

inflation.⁴ Combined state and federal gas taxes would need to be increased to \$0.81 per gallon (compared to the current combined rate of \$0.384). Even if increased to this amount, variable construction costs and increasing fuel efficiency would continue to erode the buying power of the increased revenues over time.

Exhibit 2-8 shows the relationship between the costs of building transportation improvements compared to gas tax revenue. The Highway Cost Index measures fluctuating construction costs, and the State Fuel Tax Revenue Index measures the receipt of fuel tax revenue over time. As costs rise, revenues remain stagnant, resulting in risk of the region falling further behind in its ability to mitigate congestion and implement needed projects.



⁴ Calculated by the North Central Texas Council of Governments using the Bureau of Labor Statistics Consumer Price Index.

⁵ Congressional Budget Office, [Testimony on Addressing the Long-Term Solvency of the Highway Trust Fund](#), April 14, 2021.

Impact of Transportation Technology

Another factor in declining revenues is fuel efficiency and the increase in electric vehicle adoption. As cars become more efficient, people purchase less fuel to travel the same distance. Those driving electric vehicles pay no gas taxes at all. This trend ultimately helps improve air quality in the region; however, it also puts traditional state and federal funds at risk. The less fuel purchased, the less revenue there is to distribute back to the region unless revenue streams adapt to new structural changes to the fiscal landscape. In fact, the federal government has had to cover shortfalls in the Highway Trust Fund by transferring more than \$150 billion from the General Fund since 2008.⁵ As electric vehicles gain greater market share, gas tax revenues will be impacted, resulting in the need for policymakers to consider solutions for adapting to consumer and driving patterns in the future. According to a recent analysis by the North Central Texas Council of Governments, the revenue loss due to electric vehicle adoption in Texas could add up to \$11.2 billion by 2040, with \$3.3 billion of that loss felt in the Dallas-Fort Worth region.⁶ Since a quarter of state gas tax receipts are diverted to education, this equates to \$1.5 billion educational facilities would lose statewide.

Exploring Solutions

Because of stagnating revenues and inflation, increasing fuel efficiency, and rising electric vehicle adoption, it will be necessary to pursue sustainable funding solutions in the future. Thus, there is now increased attention on finding ways to increase funding or developing appropriate revenue streams. Strategies being proposed across the country include increasing motor fuel taxes or implementing new road usage charges to replace the gas tax altogether. At the local level, bonds and value capture strategies are a

⁶ North Central Texas Council of Governments, 2019. Data available for electric vehicle registration trends for Texas and the Dallas-Fort Worth region from 2019-2040.

means of obtaining needed funding right away, though they must be carefully considered in the context of local priorities and budgets.

An often-mentioned way to increase needed revenue streams is to increase motor fuel taxes. Several states have already passed increases to the state fuel tax, while the White House and Congress are debating an increase at the federal level. Increasing fuel taxes would help ease the instability of the revenue stream by compensating for lost value caused by inflation. However, future increases to the fuel tax would still decrease year-over-year because of the increasing fuel efficiency of vehicles. Because of this, increasing fuel taxes would not ensure viability of transportation revenue in the long term.

To move toward a sustainable funding model, a few states are testing systems that would charge drivers on a per-mile basis, also known as a VMT (vehicle miles traveled) fee. Instead of taxing drivers based on how much fuel they purchase, the VMT fee would charge drivers based on how many miles they drive. States like California, Washington, Oregon, Iowa, Nevada, Minnesota, and others have begun to implement pilot programs to study elements of the system such as ways people can submit miles traveled, how to collect the fee, and how to operate the system between regions and states.⁷ States are also testing ways to protect citizens' privacy.

VMT fees could address declining revenues and would replace the gas tax with a more equitable and sustainable source of funding, because those driving hybrid and electric vehicles currently pay fewer or no fuel taxes. Under a user charge system, all drivers would contribute the same amount per mile. VMT fees could be a flat rate such as \$0.015 per mile, or variable based on time of day, to help manage traffic congestion. Because of the unsustainable nature of the gas tax in the future, strategies like VMT fees would help create

an equitable solution to the maintenance and development of the region's transportation system.

Summary

A foundation of a strong region is a well-maintained and accessible transportation system. The Mobility 2045 Update represents a \$148 billion blueprint for the continued maintenance and development of the North Central Texas region's transportation system over 20-plus years. The plan also highlights the financial planning process and discusses long-term funding issues and solutions. The Mobility 2045 Update complies with all state and federal financial requirements for Metropolitan Transportation Plans and **Exhibit 2-5** summarizes the anticipated revenues and expenditures. The source of funds for any given expenditure may change as projects develop. As North Central Texas continues to increase in population, additional solutions will be imperative to comprehensively address ever-increasing transportation needs. The Mobility 2045 Update is a step forward in implementing the strong transportation foundation needed for the region's future.

⁷ Federal Highway Administration (2016), California Department of Transportation (2017), and Congressional Research Service (2016)