

*Executive Summary*

**Transportation Funding Options  
for the  
State of South Carolina  
2003-2022**

Transportation Funding Series  
Special Report No. 3

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The Jim Self Center on the Future



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16. Abstract <b>This report is the third and final report in a series addressing transportation funding in the state of South Carolina prepared by the Jim Self Center on the Future at Clemson University's Strom Thurmond Institute of Government and Public Affairs. This final report examines current and alternative funding options and the potential of these options to meet projected transportation infrastructure needs. Current and alternative funding options are considered in terms of efficiency, equity, accountability, and stability criteria.</b>  <b>To assess the potential of current and supplemental funding options to meet future needs, a series of six scenarios were evaluated to determine the potential of meeting the \$56.9 billion target of the <i>South Carolina Multimodal Transportation Plan</i> over the period from 2003 to 2022. The baseline scenario based on current funding sources at current rates projects a revenue stream of \$26.3 billion over 20 years, leaving a \$30.6 billion shortfall. Alternatives considered include two increased federal funding scenarios, supplemental funding sources, and initial rate increases in state fuel taxes and vehicle registration fees combined with inflation indexing. With all of those options included, revenue streams meet or exceed projected needs. Yet removal of supplemental sources from the revenue mix reestablishes a budget gap of \$12.7 billion to \$17.1 billion over 20 years, even with increases in current state and federal sources and indexing.</b>  <b>Based on this assessment, it is clear that the state must expand and diversify its funding base for transportation infrastructure. The approach must be strategic in terms of multimodal expenditure commitments. Higher fuel taxes with indexing are recommended although supplemental funding sources are also necessary. Longer term, alternatives to the fuel tax are required, while shorter term the incorporation of value pricing and more local government participation should be pursued.</b>					
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TRANSPORTATION FUNDING SERIES  
SPECIAL REPORT NO. 3

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## INTRODUCTION

The *South Carolina Multimodal Transportation Plan* projects \$56.9 billion in state transportation needs for roads, bridges, transit, and passenger rail over the next twenty years. At current funding rates, a \$30.6 billion gap exists between projected transportation infrastructure needs and the revenue base. Although all states are facing funding shortfalls in meeting long-term transportation needs, the situation in South Carolina is particularly daunting.

Since 1965, real per capita expenditures on transportation infrastructure in South Carolina have declined by 36 percent, placing the state last in the Southeast and 48<sup>th</sup> in the U.S. in per capita revenue growth over that time period. Since 1987 when the state motor fuel tax was last raised to 16 cents per gallon (cpg), the purchasing power of that tax rate has fallen by 38 percent. The equivalent state fuel tax in 2003 dollars would be 25.8 cpg. Currently the state ranks 48th in per capita expenditures on transportation and last in expenditures per state-maintained road mile. Add to that the state's eroding revenue base, infrastructure needs driven by high projected growth rates, and an increasing level of urbanization in the state, and the funding gap for transportation is expected to widen in the future.

This report is the third in a series of reports addressing transportation funding issues in the state of South Carolina. The first report in this series identified key issues and discussed options in a survey of 1,000 state drivers. Safety, road maintenance, and congestion were deemed important issues, and respondents indicated that they would be willing to pay to make improvements in those areas. Respondents also indicated that users of the transportation network should bear the financial burden.

The second report examined driving forces affecting the demand for transportation infrastructure and historical trends in transportation finance. It also provided a comparative state assessment of transportation funding. Among the key findings were that South Carolina has the second highest dependency on motor fuel taxes in the country with 88 percent of total transportation revenues coming from combined state and federal fuel taxes—that despite having the sixth lowest overall fuel tax rate (base rate plus sales tax) in the country. The South Carolina Department of Transportation (SCDOT) estimates that 92 percent of its current state-source revenue comes from fuel taxes. That funding base has failed to keep pace with inflation and utilization rates. Other current funding sources for transportation are limited, and a portion of those revenues are earmarked for uses other than transportation infrastructure.

Because of budget constraints, the state has made substantial inroads in terms of innovative transportation finance. South Carolina has the most active State Infrastructure Bank in the country and SCDOT's *27 in 7 Peak Performance Program* is accelerating 27 years worth of projects (if using only pay-as-you-go financing) into only

seven years of construction. Still, innovative finance mechanisms creatively adjust cash flow but do not increase the funding base. To meet identified transportation infrastructure needs, the state must both expand and diversify its revenue base.

## FUNDING OPTIONS

This third report examines current and alternative funding options and generates a series of scenarios to assess the potential of current and alternative funding sources and higher user fees to meet transportation infrastructure needs identified in SCDOT's *South Carolina Multimodal Transportation Plan*. Current sources of funding for state transportation infrastructure include:

- state and federal fuel taxes,
- vehicle registration and carrier fees,
- roadway tolls, and
- local fees and local sales taxes.

Supplemental funding sources addressed in this report include:

- vehicle miles traveled (VMT) tax,
- road damage or weight/distance tax,
- development impact fees,
- value pricing, including congestion and parking fees,
- alternative fuel taxes,
- environmental levies,
- privatization, and
- other local revenue options.

Each option is considered in terms of efficiency, equity, accountability, and stability criteria. A strong case is made on efficiency grounds for user fees to finance the construction and maintenance of roads and bridges. Fuel taxes are the primary source of revenue for funding transportation infrastructure. From an efficiency perspective, tax rates should be set to recover the full cost of the system from users who benefit from that system. Equity issues include income distribution, urban/rural and regional geographic differences, and intergenerational concerns. Other transportation modes must be addressed with both fuel taxes and a diversified funding portfolio that includes a wider array of both state and local funding options.

Accountability in government program delivery has become still more important in recent years given increased demands and tight budget constraints. With transportation systems, accountability relates to assurance that public monies are put to their highest use, that programs are efficiently executed, and that expenditures meet with public acceptance. The final criterion addressed is stability in terms of the resource base. Transportation revenue bases have been eroded in recent years given the infrequency

of rate adjustments at both state and federal levels. Heavy reliance on static per-gallon fuel tax rates leaves states vulnerable to a widening budget wedge.

### REVENUE PROJECTIONS

To assess the potential of current and supplemental funding options to meet future transportation infrastructure needs, a series of six scenarios were evaluated to determine their potential for meeting the \$56.9 billion revenue target of the *South Carolina Multimodal Transportation Plan*. Future transportation system utilization rates were estimated based on projected vehicle registrations, VMTs, and fuel consumption. Those utilization rates were used to project annual revenue streams.

The baseline scenario assumes that South Carolina continues to rely only on existing revenue sources at current rates. This scenario generates \$26.3 billion in revenues over the next 20 years, which represents a \$30.6 billion shortfall in funding for the state’s identified transportation infrastructure needs (Table S.1, Figure S.1). Closing the \$30.6 billion gap with the state fuel tax alone without increases in other funding sources would require an average fuel tax rate of 56.8 cpg over that time period, a 255 percent increase over the current rate of 16 cpg. This second scenario clearly shows that the funding gap is wide and that to close the gap using state fuel taxes alone is unrealistic.

Figure S.1  
The South Carolina Transportation Infrastructure Funding Gap, 2003-2022:  
Current Revenue Sources at Current Rates  
(Billions of 2002 dollars)

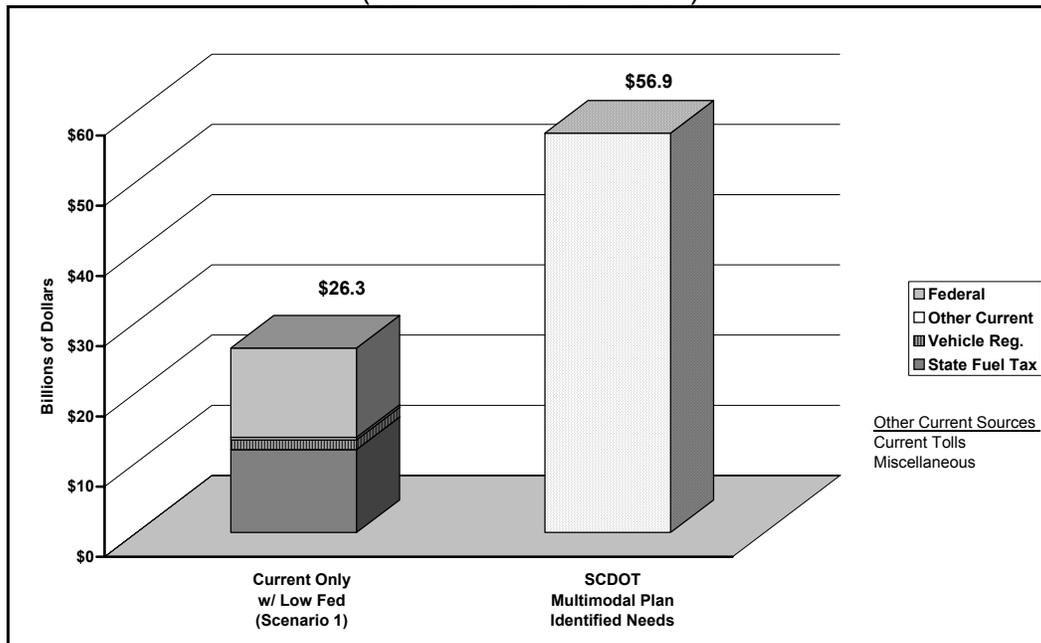


Table S.1  
Six Scenarios for Transportation Infrastructure Funding: 20-Year Revenue Summary  
(Billions of 2002 dollars)

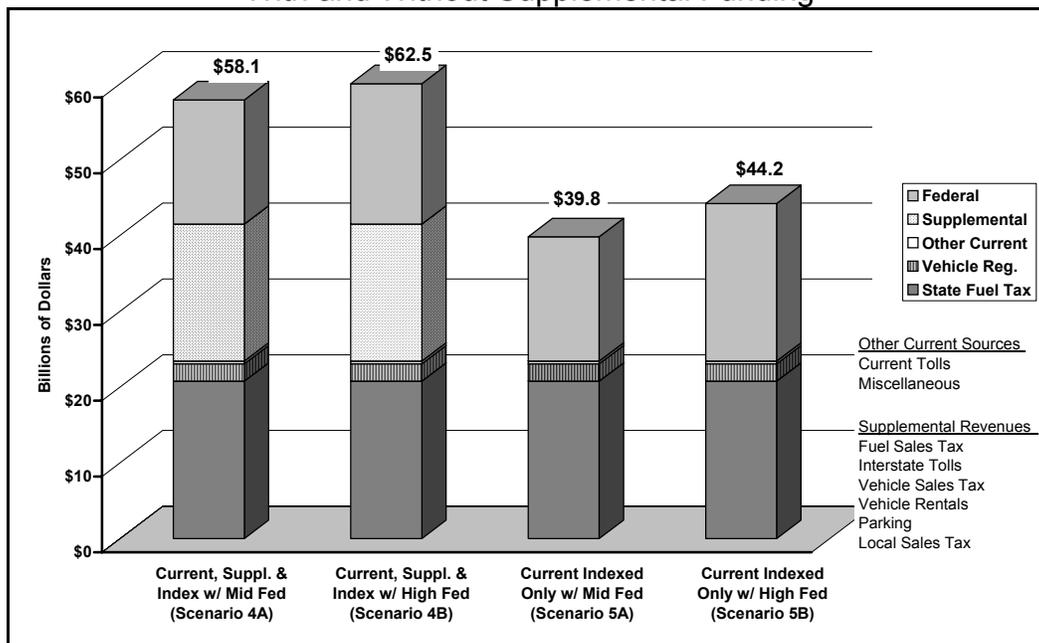
Revenue Sources	Scenario Number	Federal Funding	Total Revenue	Revenue Target	Surplus/ (Shortfall)
<b>Scenario 1</b>					
Current sources & rates only with current federal funding	1	Low	\$26.3	\$56.9	(\$30.6)
<b>Scenario 2</b>					
Current sources & rates with increased federal funding	2a	Moderate	\$30.0	\$56.9	(\$26.9)
Current sources & rates with increased federal funding	2b	High	\$34.3	\$56.9	(\$22.6)
<b>Scenario 3</b>					
Current & supplemental sources with increased federal funding	3a	Moderate	\$48.3	\$56.9	(\$8.6)
Current & supplemental sources with increased federal funding	3b	High	\$52.7	\$56.9	(\$4.2)
<b>Scenario 4</b>					
Current & supplemental sources with inflation-indexed fuel taxes and vehicle fees, and increased federal funding	4a	Moderate	\$58.2	\$56.9	\$1.3
Current & supplemental sources with indexed fuel taxes and vehicle fees and increased federal funding	4b	High	\$62.5	\$56.9	\$5.6
<b>Scenario 5</b>					
Current sources only with indexed fuel taxes and vehicle fees and increased federal funding	5a	Moderate	\$39.8	\$56.9	(\$17.1)
Current sources only with inflation-indexed fuel taxes and vehicle fees and increased federal funding	5b	High	\$44.2	\$56.9	(\$12.7)
<b>Scenario 6</b>					
Business Alliance For Transportation recommendations with increased federal funding	6a	Moderate	\$43.3	\$56.9	(\$13.6)
Business Alliance For Transportation recommendations with increased federal funding	6b	High	\$47.7	\$56.9	(\$9.2)

Subsequent scenarios introduce a series of enhanced revenue options including: increased federal funding, increased rates on current revenue sources, and supplemental revenue sources. Uncertainty exists concerning future federal funding levels as reauthorization of the federal transportation program is currently under consideration. To address this issue, federal funding projections were generated under two alternative funding assumptions. Introduction of moderate and high levels of federal support over current levels increases the state's transportation revenue potential to between \$30.0 billion to \$34.3 billion, respectively. Despite the injections of increased federal funding, a gap of between \$22.6 billion and \$26.9 billion remains.

Supplemental funding sources introduced include: a fuel sales tax, an interstate toll, removal of the cap on vehicle sales taxes and the exemption on car rental surcharges, local option sales taxes, and urban parking fees. A full allocation of these supplemental revenue sources generates an estimated \$20.5 billion in revenues for the state. Adjusting for previous legislative commitments, current and supplemental sources together are projected to generate from \$48.3 billion to \$52.7 billion, depending on the level of federal funding. In these scenarios, the funding gap is closed to between \$4.2 billion and \$8.6 billion. It is important to note that these figures assume enactment of all of the supplemental funding sources minus previous commitments and reasonable expectations on federal funding levels.

Despite the importance of the state motor fuel tax in meeting revenue targets, the fuel tax rate has been static since the last increase in 1987. Given the infrequency of rate increases, critical elements of the state’s funding strategy must include both initial rate increases and inflation indexing to mitigate further erosion of the funding base. With an initial bump in vehicle registration fees and indexing of both vehicle registration fees and state fuel taxes, revenues are projected to increase to between \$52.9 billion and \$57.2 billion without an initial fuel tax rate increase. By also adding an initial five cpg increase in the state motor fuel tax rate, revenues are projected to increase to between \$58.2 billion and \$62.5 billion, depending on the level of future federal funding received by the state (Figure S.2).

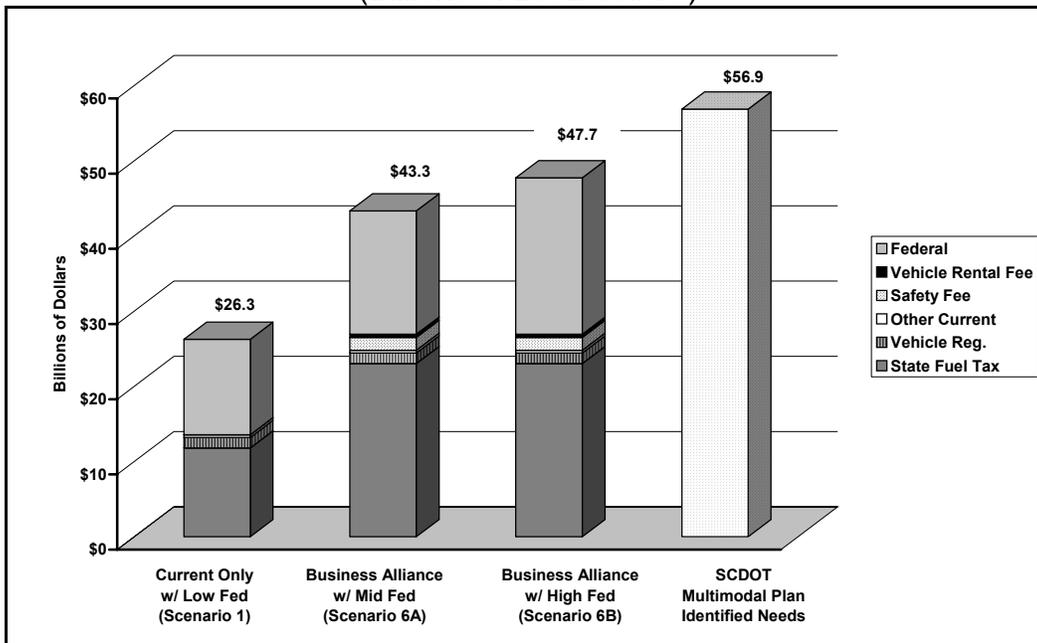
Figure S.2  
The South Carolina Transportation Infrastructure Funding Gap:  
Current and Indexed Revenue Sources  
With and Without Supplemental Funding



The above scenarios come close to meeting—or at the high end exceeding—the state’s transportation infrastructure revenue requirements. Yet all of the supplemental sources included in these scenarios will be politically contentious to at least some segments of the population whether the revenue sources are sales taxes on fuel, interstate tolls, or local option sales taxes for urban infrastructure. Removal of all of the supplemental sources from the revenue mix reduces projected revenues to between \$39.8 billion and \$44.2 billion and creates a revenue shortfall of between \$12.7 billion and \$17.1 billion, even with initial increases in both fuel taxes and vehicle registration fees and inflation indexing of both (Figure S.2). To fully close that gap with state fuel tax revenues would require an average state motor fuel tax rate of between 44.1 cpg and 49.9 cpg over the 20-year period. These figures suggest that it is very important to not only increase the funding base but also to diversify the funding base to meet projected transportation requirements.

The final scenario is based on recommendations of the Business Alliance for Transportation, a working group of the South Carolina Transportation Policy and Research Council. The Business Alliance released recommendations in January 2003 calling for an additional \$326 million per year in increased revenue sources to meet transportation infrastructure needs (Figure S.3).

Figure S.3  
The South Carolina Transportation Infrastructure Funding Gap:  
Business Alliance for Transportation Policy Recommendations\*  
(Billions of 2002 dollars)



\*Business Alliance recommendations applied to STI model.

When the Business Alliance's policy recommendations were applied to the revenue projection model used in this report, their numbers generated an additional \$13.4 billion in revenue over current sources over the next twenty years. Total revenue with alternative federal assumptions ranges from \$43.3 billion to \$47.7 billion, leaving a shortfall of between \$9.2 billion and \$13.6 billion, depending on the future level of federal aid received. To be fair to the Business Alliance, the group's primary interest is in highway improvements. Its recommendations have won strong support in diverse sectors of the business community and move the state in the right direction, but some additional revenue sources will be required to fully close the funding gap.

## **RECOMMENDATIONS**

Given the current state budget crisis, meeting significant general revenue shortfalls in the new fiscal year will dominate the General Assembly's political agenda. Yet, a transportation funding crisis is looming on the horizon. To address this issue with a viable transportation funding strategy will require a thorough assessment of funding options and the political will to implement a long-term funding program. There is no genie in the bottle.

It is hoped that this report and the other two reports in the series help to shed light on the magnitude of the transportation infrastructure problem in South Carolina and offer some insight on how it might be addressed. As the state moves toward meeting long-term transportation needs, the following recommendations are strongly suggested:

- The state must expand and diversify its funding base to close a significant and widening transportation funding gap over the next twenty years. To address this funding gap, a detailed financial plan should be developed to meet long-term infrastructure needs. Short-term stopgap measures will not solve the problem.
- The financial plan must address multimodal transportation needs as well as highways and bridges. Highways continue to be the dominant element of the state's surface transportation system, but intermodal connections with both passenger and freight transfer facilities will be increasingly important to meet South Carolina's projected demographic and economic demands.
- Given significant transportation needs and tight budget constraints, it is important that the state be strategic in terms of transportation infrastructure investments. High priority needs that address safety, economic development, and congestion must be identified. Then, objective funding criteria should be used to make sure that available funds are targeted to highest priority construction and maintenance expenditures.
- The transportation funding mix should promote efficiency in system delivery and utilization with heavy reliance on user fees and full cost accounting principles. At

the same time, funding options must incorporate equity, accountability, and stability criteria.

- The state motor fuel tax will continue to be South Carolina's primary funding source for transportation infrastructure in the immediate future. Since the last state fuel tax increase in 1987, the purchasing power of the state fuel tax has been reduced by 38 percent. The equivalent tax rate in 2003 dollars is 25.8 cents per gallon (cpg), or 9.8 cpg higher than the current rate. The fuel tax first must be raised to capture lost purchasing power and then be indexed for inflation to prevent future revenue erosion. Stabilization of the fuel tax base is essential.
- Greater reliance on other current revenue sources should be developed, with higher shares of these revenues used to support transportation infrastructure improvements. Increased utilization of state general fund revenues will be necessary to address transportation expenditures that cannot be fully covered by user fees.
- New supplemental funding sources must be developed to broaden the transportation funding base. Even with increased federal funding, sole dependence on the state fuel tax would require an immediate jump to an average state fuel tax rate of between 46 cpg and 52 cpg to close the projected funding gap over the next 20 years. If federal funding does not increase over current levels, the fuel tax rate would need to be as high as 57 cpg to close the funding gap. These rates are politically unacceptable and require that additional funding sources be introduced.
- Over the long term, the state will need to consider alternatives to the fuel tax to address revenue losses associated with expected technological change and greater fuel efficiency in vehicles. Smart odometer and privacy sensitive Global Positioning Satellite (GPS) units are in development and should be operational within the next decade. The state should be proactive in terms of an eventual transition to a vehicle miles traveled (VMT) and/or a weight/distance-based funding system.
- Value pricing and congestion fees should be introduced to deal with increasing congestion in the state's urban areas and tourism destinations. By promoting greater efficiency in the use of existing infrastructure, new capital expenditures may be delayed or in some cases become unnecessary.
- Local government participation in meeting transportation priorities will be increasingly important. That participation may involve greater cost sharing on priority projects, but doing so also will require more funding options for local governments to meet expanded obligations.