



## EXECUTIVE SUMMARY

Executive Summary .....	1
Background .....	2
Findings of Need .....	2 - 3
Highway Funding Accounts and their Governing Bodies.....	3
Sources of Revenue .....	4 - 7
Economic and Political Forces Affecting Revenues .....	7- 10
Potential Revenue Enhancements .....	10 - 12
Consequences of Inaction.....	12 - 13
Task Force Roster .....	13
Footnotes and References .....	14 - 16
Acronyms Used in this Report .....	16

This report is based on a year-long effort by the Transportation Infrastructure Task Force, a diverse group of transportation professionals and private citizens from across the state of South Carolina. It was sanctioned and has been reviewed and approved by the SCDOT Commission. The intent of the report is to be factual, practical, comprehensive and objective. The report intentionally includes a review of all state highway programs, not just those under the purview of SCDOT. This holistic approach provides the basis for a broad understanding and it allows the reader to measure South Carolina's highway programs against other states.

It is not the intent of the Commission to recommend any particular solution, but rather to describe the situation and offer alternatives for consideration by the state's leadership. As with any report of this nature, it may be easy for the pundits to pull excerpts from the text which would allow for information to be taken out of context. To avoid the judgments that result from such actions, the reader is encouraged to read the full report.

The report is divided into six major sections. They are: Findings of Need; Governance; Sources of Revenue; Economic and Political Forces Affecting Revenues; Potential Revenue Enhancements; and Consequences of Inaction. Extreme care has been taken to provide documentation of data and analysis, with 32 footnotes and 14 charts and graphs.

The report shows that current funding levels are far below regional and national norms and that, consequently the state is expending the vast majority of its funds on highway maintenance and upkeep. Despite this emphasis on maintenance, the current condition of the highway system contrasted with the current funding levels foretells a guaranteed decline in the system over the next twenty years. To address this, it is clear that a bottom up review of revenue policy is in order. Of particular concern is the state's lack of revenue diversification and the long-term diminishing returns associated with its current revenue base.

The report accentuates the various economic and political forces that have created an environment of reduced purchasing power and increased need. These forces include inflation, improvements in vehicle fuel efficiency, aging of the highway system, population growth, changing freight patterns, anti-tax sentiments, unfunded mandates, fragmentation of governance, and state government's high level of responsibility for highways vis-à-vis local government as compared to the national norm. The report also provides a brief summary of the revenue sources currently being used by other states to provide 65% of state-source highway funding nationwide from non-fuel sources.

It is the conclusion of the Task Force and the SCDOT Commission that misconceptions and a lack of knowledge regarding public policy have resulted in a benign neglect of statewide highway needs. The last section of the report outlines the consequences of failing to act. Those consequences include deterioration of roads and bridges, reduced highway safety, posting or closing of bridges, increased traffic congestion, increased vehicle upkeep, and a loss of economic competitiveness.

This report will leave readers with a basic understanding of the complex subject of transportation policy in the state of South Carolina. While it is easy to assess blame or make excuses, there is clearly one logical and sensible conclusion that must be reached after reading this report. The time for action is now, before the decline of the highway system becomes irreversible.

## BACKGROUND

The Transportation Infrastructure Task Force was created by the South Carolina Department of Transportation Commission (the Commission) in August, 2011. The Commission is a statutorily established policy-making board. One Commissioner is appointed by the Governor and the rest are elected by the members of the General Assembly based on Congressional Districts. The Governor appoints, and the Senate confirms, the appointment of the Secretary of Transportation who is responsible to both the Governor and the Commission for the day-to-day activities of the Department. Consequently, the activities of the Task Force and the contents of this report were guided by the Commission and were administratively supported by SCDOT staff.

The purpose of the Task Force was to look for ways to enhance revenues both through improved efficiencies and increased funding. The Task Force was chaired by Commissioner Craig Forrest and it was comprised of sixteen public and private sector representatives from across the state.<sup>1</sup>

The Task Force received testimony from a number of individuals and organizations, including: the South Carolina Department of Transportation; the South Carolina Chamber of Commerce; the South Carolina Trucking Association; The Jim Self Center of the Strom Thurmond Institute at Clemson University; the South Carolina Transportation Infrastructure Bank; the South Carolina Alliance to Fix Our Roads; the Municipal Association of South Carolina; and the Carolinas AGC chapter of the Associated General Contractors of America.

The work of the Task Force was done over a fourteen month period. This report is the result of that work. It is intended to help readers understand the issues at hand and identify potential revenue enhancements.

## FINDINGS OF NEED

This section of the report will include information describing the state's highway system and estimating how much additional funding would be required to bring the entire system up to a level of "good." The Commission does not recommend, or expect, that revenues will actually be raised to meet the entire need. Nevertheless, the Task Force and the Commission both felt that it was important to fully quantify the state's needs to better understand the scale and enormity of the challenge facing the state.

The South Carolina State Highway System is comprised of 41,429 miles, representing nearly two-thirds of all public miles in the state (63%). State-source highway funding comes from the State Highway Fund (SHF), the state Non-Federal Aid Highway Account (NFAHA), the C-Fund, and the South Carolina Transportation Infrastructure Bank (SCTIB). The first two are under the control of SCDOT. These four programs combined total about \$640 million in annual recurring state-source revenue for use on state roads in South Carolina. Only the projects under the control of SCDOT are required to be prioritized and funded based on an empirical formula. With Interstate interchanges costing \$35 to \$50 million each and widening projects (using existing

right-of-way) costing \$10 to \$12 million per mile, it doesn't take long for limited resources to get obligated.

Across America, the average state is responsible for only 19% of the public miles within its borders, so South Carolina's level of responsibility is more than three times the national average.<sup>21</sup> Yet, the State of South Carolina's highway program is funded by a revenue base that is well below the national average and clearly insufficient to meet the construction and maintenance needs of the state. This is evident by the fact that, on average, federal-aid makes up only 30% of funding for state-maintained roads across the nation,<sup>22</sup> while in South Carolina, federal-aid represents nearly 60% of SCDOT's budget. To achieve the national average whereby 30% of funding is derived from federal funds and 70% is derived from state funds, the state would have to increase funding by \$700 million per year (based on the current federal funding level of \$608 million).

The above calculation does not take the state's high level of responsibility into consideration because a \$700 million per year increase would raise South Carolina to the level of funding used by other states to maintain only 19% of the state's public miles while SCDOT must maintain 63% of the state's public roads. On a pure "funding per mile" basis, a \$4.1 billion annual increase would be required to bring South Carolina up to the national average. These are staggering numbers and they should only be used as a reference point. They do not document actual needs. They are simply an indicator that South Carolina's highway funding levels are severely out of balance with the state's highway needs.

To determine actual needs, the Task Force asked SCDOT for an engineering analysis of the condition of the existing highway system and the projected cost of upgrading that system to a condition of "good," which is a service level of "C." Additionally, the Task Force considered the need for system expansion and the need to provide adequate resources for economic development projects.

The following is a summary of the 20-year needs portion of a report given to the Task Force by Secretary of Transportation Robert J. St. Onge:

<b>STATEWIDE TRANSPORTATION NEEDS</b> <i>Through 2033</i>	
	Cost (\$billion)
Bridge Replacement	\$ 3.00
Highway System Maintenance	\$ 17.00
Highway System Upgrades	\$ 11.00
Interstate System Upgrades	\$ 11.00
Mass Transit	\$ 3.90
Premium Transit and Passenger Rail	\$ 1.40
Safety	\$ 1.00
<b>Total Needs</b>	<b>\$ 48.30</b>
<b>Currently anticipated funding</b>	<b>\$ 19.00</b>
<b>Shortfall</b>	<b>\$ 29.30</b>

Based on these numbers, SCDOT anticipates a \$29.3 billion shortfall over the next 20 years to bring the state’s roads to a service level of “C.” This number includes a small adjustment for inflation, the amount needed to catch up with deferred maintenance, the amount needed to address anticipated deterioration during the 20-year period, and the amount needed to address the state’s most pressing congestion problems. It does not include funding for economic development projects.

The SHF has historically been almost solely dependent on motor fuel user fee revenue. Due to improved vehicle fuel efficiency and increased fuel costs, motor fuel revenues are no longer a growing source of funding. For this reason, it is anticipated that any future revenue enhancement by the state must include a diversified source of revenues. The SCDOT Construction Cost Index grew 91% between January 1, 2000 and December 31, 2011, while state motor fuel revenues grew only 16% during that same time period, so it is important that any future revenue sources be designed to grow as needs grow.

Based on a five year ramp up and a 2% annual revenue growth rate thereafter, the following new revenues will be needed to meet the needs outlined by Secretary St. Onge to achieve a service level of “C.”

<b>GETTING TO GOOD</b>	
<b>20-Year Funding Needs – New Revenue</b>	
<b>FISCAL YEAR</b>	<b>AMOUNT NEEDED (NEW \$)</b>
2014	\$ 450,000,000
2015	\$ 650,000,000
2016	\$ 900,000,000
2017	\$ 1,250,000,000
2018	\$ 1,400,000,000
2019	\$ 1,428,000,000
2020	\$ 1,456,560,000
2021	\$ 1,485,691,200
2022	\$ 1,515,405,024
2023	\$ 1,545,713,124
2024	\$ 1,576,627,387
2025	\$ 1,608,159,935
2026	\$ 1,640,323,133
2027	\$ 1,673,129,596
2028	\$ 1,706,592,188
2029	\$ 1,740,724,032
2030	\$ 1,775,538,512
2031	\$ 1,811,049,283
2032	\$ 1,847,270,268
2033	\$ 1,884,215,674
<b>20-YR TOTAL</b>	<b>\$ 29,344,999,356</b>

## HIGHWAY FUNDING ACCOUNTS AND THEIR GOVERNING BODIES

As stated above, South Carolina state government has four separate sources of dedicated highway funding. Control of these accounts is fragmented among forty-eight governing bodies. The following is a summary of how each account is administered and governed.

### State Highway Fund (SHF)

This is the oldest and most well-known highway funding source. Funding comes mostly from the state motor fuel user fee. It is used for the operation of SCDOT, including federal match, routine maintenance and resurfacing, administration, payroll/benefits, capital improvements, transit programs, debt service, transfers to the SCTIB and the C-Fund, and other operational activities. Budgetary control is by the SCDOT Commission and it is administered under the direction of the Secretary of Transportation. The Commission includes one member from each Congressional District, elected by the members of the General Assembly residing in each district, and one member at large appointed by the Governor.

### Non-Federal Aid Highway Account (NFAHA)

This account was created in 2005 to supplement funding for the maintenance of roads that do not qualify for federal assistance. Funding comes from various sources (See chart on page 4). It may be used only for the maintenance of non-federal aid roads, and it may not be used for administrative expenses. Budgetary control is by the SCDOT Commission and it is administered under the direction of the Secretary of Transportation.

### C-Fund

This account was first created in 1946. It is controlled by 46 separate County Transportation Committees (CTCs) appointed by each legislative delegation. It is funded from 2.66 cents of the user fee on gasoline plus an annual transfer of \$9.5 million from the SHF to those counties contributing more to the C-Fund than they receive by formula (“donor” counties). Up to 75% of each county’s C-Fund allocation may be used for the construction and maintenance of local (non-state) roads. All projects are selected by the individual CTCs. Some CTCs self-administer their funds and some accounts are administered by SCDOT at the request of the CTCs.

### State Transportation Infrastructure Bank (SCTIB)

Created in 1997, the SCTIB Board is comprised of seven members including the SCDOT Commission Chairman, two appointed by the Governor, two appointed by the Speaker of the House, and two appointed by the President Pro Tempore of the Senate. The source of funding is truck registration fees, a portion of auto registration fees, one penny of the user fee on gasoline, local matching funds, and various other sources. The SCTIB Board entertains competitive applications from governmental entities (mostly counties) that are required to pledge local matching dollars for major transportation projects that are financed through the SCTIB, primarily through the issuance of revenue bonds.

## SOURCES OF REVENUE

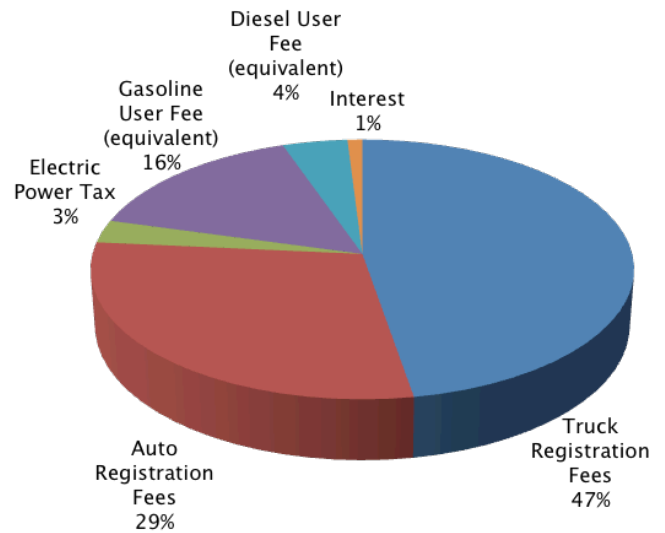
Federal-Aid highway funding in South Carolina for Fiscal Year 2012-2013 is \$608 million. These funds can generally be used on about half of the state's highways, those that meet federal standards for connectivity and arterial functionality. The state must provide a match of roughly \$147 million for that same period. The match program requires the state to pay 100% of qualified costs on each project then seek reimbursement. Over all funding categories, SCDOT is reimbursed an average of 83% on federal projects.

The federal government provides financial assistance to the state to help build and maintain highways because many of the state's roads also serve a national purpose. This does not make them federal roads. The only federal roads in South Carolina are found on military bases and other such facilities. While federal funding is designed to provide "aid" to the states for highways of national significance, state-source funding is far more critical to the day-to-day operation of each state's highway program. Recurring state-source revenues spent on the South Carolina state highway system by all state entities combined currently totals about \$640 million per year in recurring revenue. This includes the SHF, the NFAHA, the SCTIB, and that portion of the C-Fund Program designated for state roads. Primarily because of SCTIB financing, approximately 30% of this recurring revenue is currently being used for debt service.

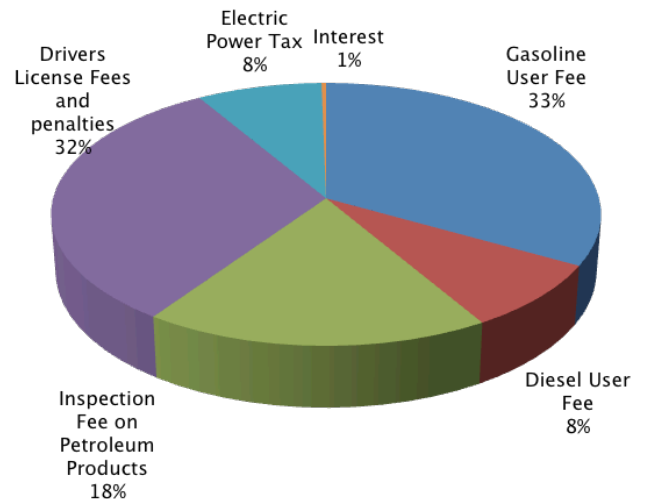
State-source highway funding comes from several sources, with motor fuel user fees remaining as the primary source. Based on testimony provided to the Task Force, motor fuel revenues are expected to remain a significant part of the funding pie for the next twenty years, but other sources, including some non-fuel sources, will be needed to stabilize funding for the state's highways. These new sources, as well as the State Highway Fund itself, should be protected against diversions.

The current sources of state-source revenue for each state-funded highway program are:

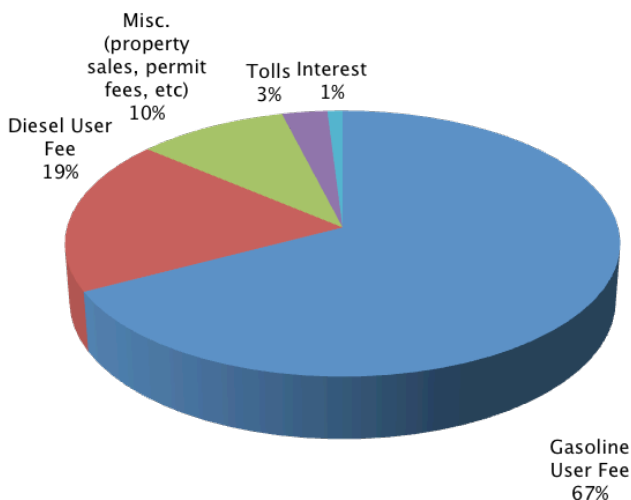
### STATE TRANSPORTATION INFRASTRUCTURE BANK \$127,000,000 (est. annual recurring revenue)



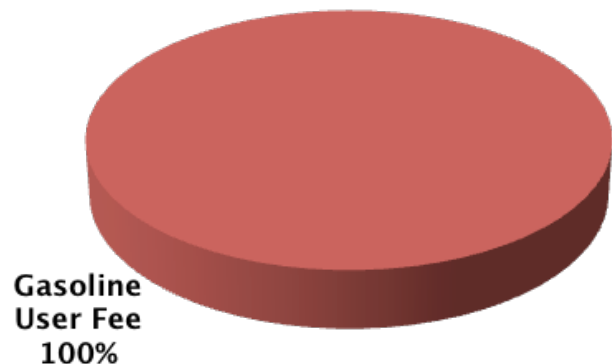
### NON-FEDERAL AID HIGHWAY ACCOUNT \$43,000,000 (est. annual recurring revenue)



### STATE HIGHWAY FUND \$453,000,000 (est. annual recurring revenue)



### STATE PORTION OF C-FUND (the 25% portion dedicated to State Highways) \$17,000,000 (est. annual recurring revenue)



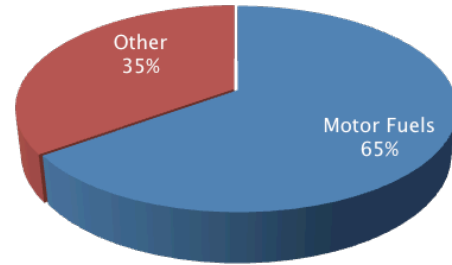
The totals shown above are rounded estimates of the current levels of funding in South Carolina's four state highway programs. When the state-source revenues are combined from the four charts above, the overall funding picture in South Carolina shows a heavy dependence on motor fuels, as shown in the following chart.

All states receive Federal-Aid highway funding. Under MAP-21, the current federal transportation authorization legislation, federal funding has become heavily dependent on General Fund (non-HTF) dollars. The federal program in FY 2014 will be 35% dependent on General Fund dollars.

**ESTIMATED RECURRING STATE-SOURCE HIGHWAY FUNDING IN SOUTH CAROLINA**  
(All State Highway Programs Combined)  
\$640.32 million (est.)

Gasoline User Fee	\$356.9M	56%
Diesel User Fee	\$ 94.6M	15%
Miscellaneous	\$ 45.0M	7%
Tolls	\$ 12.0M	2%
Interest	\$ 5.9M	1%
Petroleum Inspection Fee	\$ 7.9M	1%
Drivers License Fees/Penalties	\$ 13.8M	2%
Electric Power Tax	\$ 7.2M	1%
Truck Registrations	\$ 60.0M	9%
Automobile Registrations	\$ 37.0M	6%

**FEDERAL FUNDING SOURCES <sup>2/3</sup>**



Most states have been moving away from the strict user fee approach for years. According to the most recent federal statistics available, state-source motor fuel revenues currently account for only 35% of non-federal funding for state roads. South Carolina's dependence on motor fuels is more than twice the national average. The below chart includes all four state-source highway programs in South Carolina (SCDOT, State Transportation Infrastructure Bank, Non-Federal Aid Highway Account, and state portion of the C-Fund).

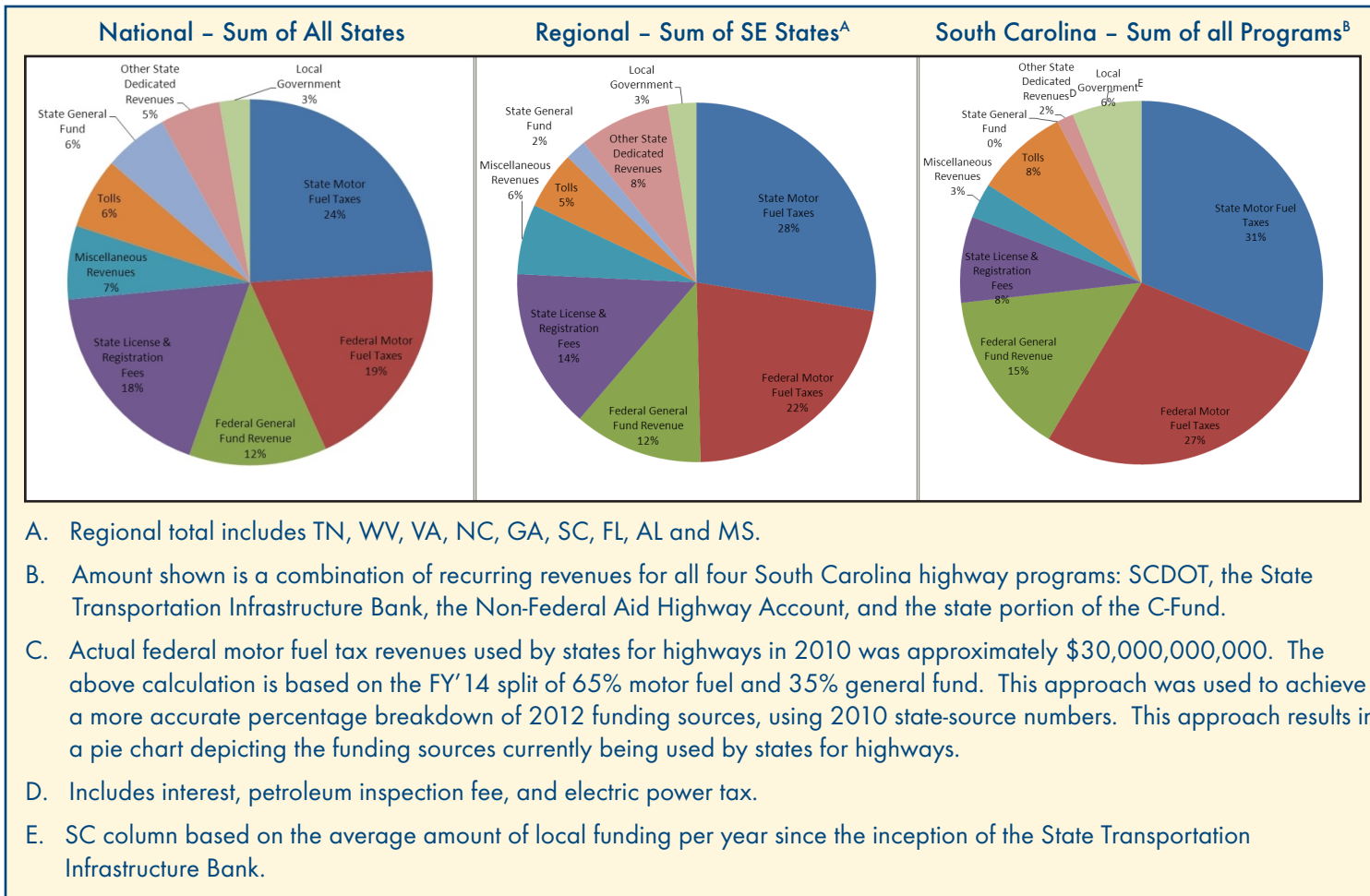
As shown in the below chart, when compared to the average state, South Carolina's total "revenue mix" reveals some glaring differences. The most striking differences are seen in South Carolina's heavy dependence on federal funding and its lack of dependence on license and registration fees. As discussed in further detail below, it should also be noted that South Carolina's dependence on state motor fuels is much higher than the average state.

**REVENUES USED BY STATES FOR HIGHWAYS <sup>2/4</sup>**  
Dollar Amounts (Footnotes A through E on following page)

Source of Revenue	National Sum of States	%	Regional Sum of States <sup>A</sup>	%	South Carolina <sup>B</sup>	%
State Motor Fuel Taxes	\$ 30,272,220,000	24.0%	\$ 6,302,811,000	27.5%	\$ 451,500,000	33.8%
Federal Motor Fuel Taxes <sup>C</sup>	\$ 24,232,735,800	19.2%	\$ 5,039,720,400	22.0%	\$ 395,200,000	29.6%
Federal General Fund Revenue	\$ 15,318,808,200	12.2%	\$ 2,713,695,600	11.6%	\$ 212,800,000	15.9%
State Lic & Reg Fees	\$ 22,766,036,000	18.1%	\$ 3,294,964,000	14.4%	\$ 110,800,000	8.3%
Miscellaneous Revenues	\$ 8,249,924,000	6.5%	\$ 1,439,170,000	6.3%	\$ 45,000,000	3.4%
Tolls	\$ 7,917,636,000	6.3%	\$ 1,194,023,000	5.2%	\$ 12,000,000	.9%
State General Funds	\$ 7,229,284,000	5.7%	\$ 427,644,000	1.9%	\$ 58,000	0%
Other State Dedicated Revenues	\$ 6,648,010,000	5.3%	\$ 1,877,068,000	8.2%	\$ 21,000,000 <sup>D</sup>	1.6%
Local Government	\$ 3,398,958,000	2.7%	\$ 595,237,000	2.6%	\$ 89,000,000 <sup>E</sup>	6.7%
<b>TOTAL</b>	<b>\$126,033,612,000</b>		<b>\$22,884,333,000</b>		<b>\$1,337,358,000</b>	



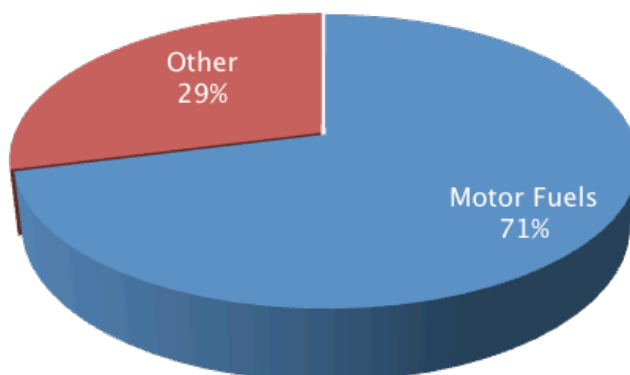
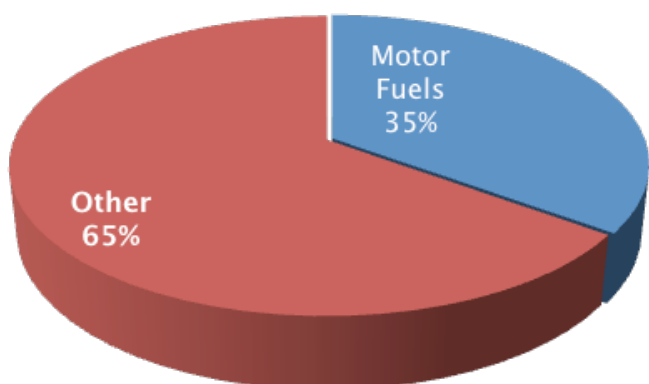
## REVENUES USED BY STATES FOR HIGHWAYS <sup>2/4</sup> – PIE CHARTS



The following two charts compare South Carolina's dependence on motor fuel revenues to the national average level of dependence on motor fuel revenues.

**STATE HIGHWAY FUNDING SOURCES - NATIONAL AVERAGE**

**SOUTH CAROLINA FUNDING SOURCES - All Programs Combined**



In recent years, local-option sales taxes and other sources of local funding have been used to supplement state and federal highway dollars in South Carolina. Much of this has been used as matching funds for SCTIB projects. SCDOT estimates that \$1.2 billion in local funds have been invested in Federal-Aid highway projects in South Carolina since 1996. Additionally, a privately financed toll road was constructed on the National Highway System in the Greenville area in 1998. Toll receipts at the facility did not meet projections, which resulted in bankruptcy, reorganization and refinancing. Nevertheless, the toll road represented an investment of approximately \$211 million in the state highway system, which was later counted as local match for the SCTIB's Upstate Grid program. Altogether, local funding for SCTIB projects has averaged about \$89 million per year since 1996.

## ECONOMIC AND POLITICAL FORCES AFFECTING REVENUES

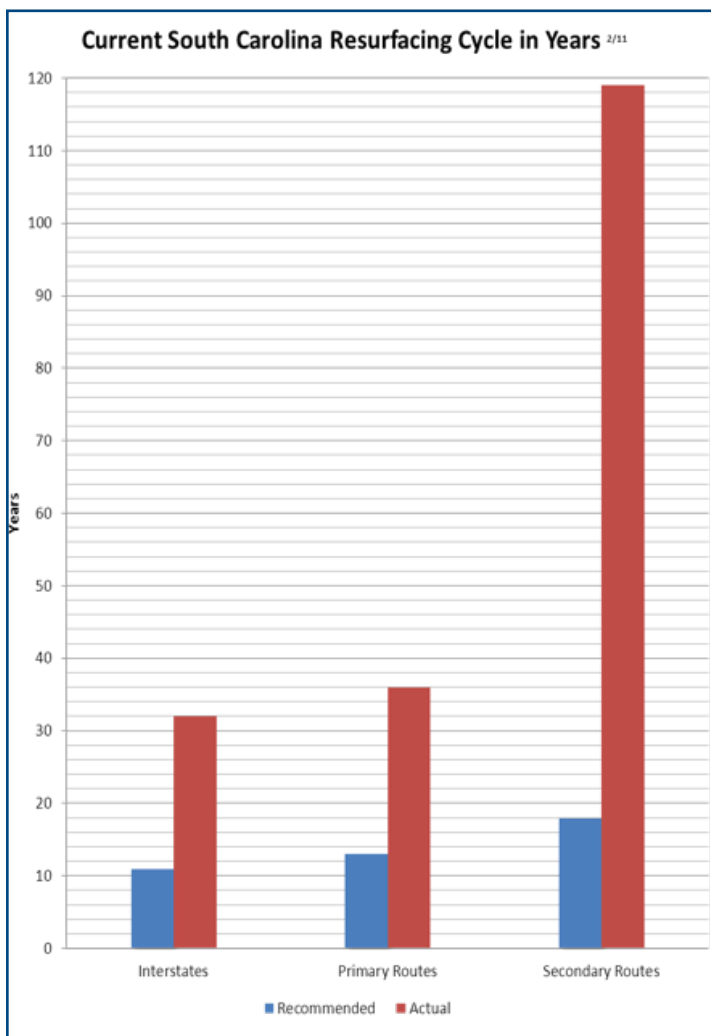
The national and global economic and political environments are constantly evolving. The forces at work in the world economy are having ripple effects throughout society. South Carolina's user fee system of financing highways continues to be seen as an appropriate and efficient means of generating revenue, but it is under pressure from several economic and political forces, including those outlined below.

1. **Inflation.** The South Carolina motor fuel user fee of 16 cents per gallon is collected in the form of an excise tax. That means it is collected on a "per unit of sale" basis. The unit is a gallon of motor fuel, either gasoline or diesel. As the cost of motor fuel has increased over the years, the user fee has remained at its 1987 rate of 16 cents per gallon. This has drastically impacted the buying power of each dollar collected. According to the Consumer Price Index (CPI) published monthly by the U.S. Bureau of Labor Statistics, the purchasing value of the South Carolina Highway User Fee of 16 cents per gallon, as established in 1987, has dropped to 7.8 cents per gallon. To keep pace with CPI inflation since 1987, the fee would have to be 33 cents per gallon today.<sup>25</sup> It should be noted that the CPI has grown more slowly than the inflation rate associated with construction costs. This is largely due to escalating commodity prices, particularly in the oil and steel sectors. The FHWA monitors construction costs separately from the CPI (<http://www.fhwa.dot.gov/policyinformation/nhcci.cfm>). In the private sector, Parsons Brinckerhoff publishes a Highway Construction Cost Index and Engineering News Record (ENR) publishes a more general Construction Cost Index. All indices indicate that inflation in highway construction costs has outstripped the CPI by more than 5% since 1993.
2. **Alternative Petroleum Fuels.** Under state law, persons operating vehicles using alternative petroleum-based fuels are required, pursuant to Section 12-28-310(A)(2) of the South Carolina Code of Laws, to pay a highway user fee to the state. This is known as the "Back-Up Tax." It includes forms of fuel sold as butane, propane, or compressed natural gas. However, the payment process lacks strict accountability.

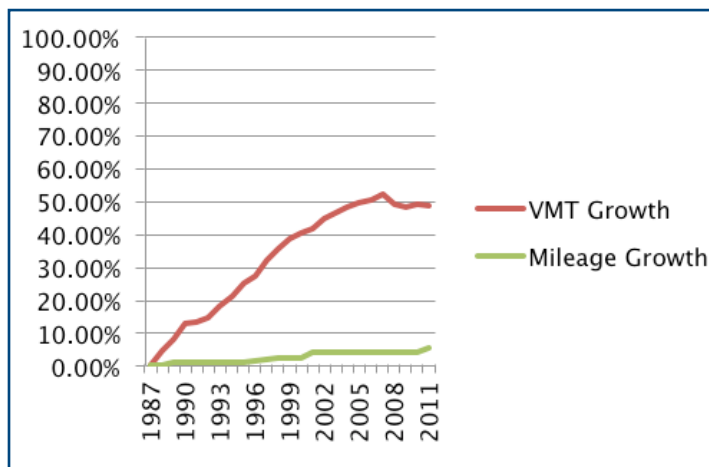
3. **Bio-Fuels.** In an effort to reduce dependence on foreign oil and to lower greenhouse gas emissions, Congress has established the "Renewable Fuel Standard (RFS)." This standard requires energy producers to generate 10% of their motor fuel in the form of bio-fuels. This has created a new paradigm in the energy sector, with many new suppliers coming onto the scene. This creates special challenges to monitor shipments/sales and capture highway user fees as diverse fuel sources such as used cooking oil, methane from plant biomass and ethanol from small producers enter the market.
4. **Federal CAFE Standards.** Congress has established programs to improve fuel efficiency and to encourage the use of non-traditional fuels. The federal Corporate Average Fuel Economy (CAFE) standards call for a nationwide improvement in fuel economy for cars and light trucks. According to the CAFE Standards, manufacturers selling vehicles in the US must attain fleet averages for miles-per-gallon that increase each year. This translates into a gradual increase in the fuel efficiency of the overall fleet of vehicles traveling America's roads. In 1987, when South Carolina's 16 cent per gallon user fee was established, the average light duty vehicle consumed 14 gallons of gasoline on a round trip from Columbia to Clemson and back. Today, the average vehicle consumes less than 11 gallons on the same trip.<sup>26</sup> This has reduced user fee collections by 21% per mile driven, not counting inflation.
5. **Other Fuels and Improvements in Fuel Economy.** According to a report published by the National Academy of Sciences, "A reduction on the order of 20 percent in average gallons of fuel consumed per vehicle mile by the light-duty vehicle fleet is possible by 2025 if fuel economy improvement is driven by new regulations or large and sustained fuel price increases. . . . After 2025, large market shares for hybrid electric and fuel cell-powered vehicles, and consequently greater reductions in gasoline consumption, are possible, if driven by government intervention or high fuel prices."<sup>27</sup> Evidence of the effect of improved fuel economy on motor fuel revenues can be seen in the reduced consumption of fuel juxtaposed to increased travel. U.S. gasoline demand in 2011 decreased to an average of 368 million gallons per day. Demand for 2012 is projected to continue to decline to 367 million gallons per day. Yet, drivers in the United States are expected to increase travel by .65% in 2012.<sup>28</sup> Fewer gallons consumed will result in reduced revenues.
6. **Petroleum Price Increases.** From 1922, when South Carolina established a state motor fuel tax, until 1974 when the OPEC Oil Embargo took place, fuel prices grew at a rate well below the CPI rate of inflation. The average national price of gasoline in 1922 was 25¢/gal. and in 1973 it was 39¢/gal., representing an increase of only 56% in 51 years. Between 1973 and today, the average national price has grown from 39¢/gal. to \$3.57/gal.,<sup>29</sup> an increase of 815% in just 25 years.

This has made it politically difficult to adjust the motor fuel user fee for inflation. The anti-tax argument has shifted. In 1987, when the average national price of gasoline was 91¢/gal., the state user fee on motor fuels made up 18% of the price of a gallon of gasoline, and today it represents about 5% of the price. In the past, the anti-tax argument was that the user fee represented too large a part of the overall price. Today, the anti-tax argument is that the price of fuel is already too high and, therefore, no taxes should be added which would drive the price even higher.

7. **Aging of the System.** As the highway system ages, the cumulative effect of growth increases maintenance needs. The Interstate System in South Carolina is approaching 50 years. The average age of South Carolina’s state-maintained bridges is now 42 years.<sup>2/10</sup> Each mile of paved surface represents an additional resurfacing need that must eventually be met. For Interstates, the resurfacing cycle should be 10 to 12 years. For primary routes, the resurfacing cycle should be 12 to 15 years, and for secondary roads, with some patching and chip sealing, resurfacing can wait perhaps 20 or more years. Based on SCDOT’s current financial ability, the resurfacing cycle currently stands at about 32 years for Interstates, 36 years for primary routes, and 119 years for secondary routes.<sup>2/11</sup>



8. **Growth in Traffic.** Between 1987 and 2011, vehicle miles travelled (VMT) in South Carolina grew 61%.<sup>2/12</sup> This growth is the result of several transformative developments in our state, including:
  - a. Population growth,
  - b. Longer commutes due to suburban residential development,
  - c. Modern freight distribution practices centered around the use of distribution centers and “just-in-time” deliveries,
  - d. Improved automotive technology, improving vehicle dependability and longevity.
9. **Congestion.** Between 1987 and 2010, vehicle miles traveled (VMT) grew at ten times the rate of highway expansion. Over the last 25 years, VMT grew 52% while total lane miles in the state highway system increased only 5.5%. This expansion rate was the slowest in the southeast. Other southeastern states expanded lanes by 18.7% during this time. A 50% increase in traffic with only a 5.5% increase in capacity has contributed toward increased congestion.<sup>2/13</sup>



10. **Freight Transportation Trends.** Trucking has become the dominant freight mode in America today, accounting for 92% of the tonnage of all freight moved within the state of South Carolina.<sup>2/14</sup> Truck freight movement is the lifeblood of South Carolina’s economy. Manufacturing, agriculture and mining production is geographically disseminated across the state, with a heavy dependence on truck routes leading to major distribution centers and the Port of Charleston. The port is projecting 8% growth in 2013. Improvements and expansions totaling \$147 million are underway with the construction of the new Navy Base Terminal and upgrades to facility infrastructure and information systems. This is intended to support the anticipated growth in import/export freight movements in the state. Inland freight movement also continues to be a major factor with the development of numerous distribution centers, including the recent construction of the Amazon



Distribution Center in Cayce. In a report describing the linkages between freight transportation and the economy, the USDOT stated, “Although improvements in passenger transportation have important economic ramifications, freight transportation enhancements that reduce the costs of moving goods (and services) to and from markets are critical to economic expansion.”<sup>2/15</sup> Nowhere is that more true than in South Carolina.

11. **Population Growth.** The population of South Carolina has grown from 3.1 million in 1980 to 4.7 million today. According to the latest data from the U.S. Census Bureau, South Carolina is one of the nation’s ten fastest growing states. The annualized growth rate since 1980 has been 1.6%, or 50,000 per year. Much of this growth has taken place in urban areas where traffic congestion is already a problem. Population growth is both a result of commercial expansion, and a cause of commercial expansion. According to the U.S. Census Bureau, in 2009 68% of the population was licensed to drive. So, it is anticipated that, as the population grows, there will be at least two new drivers for every three new people. If population growth continues at the same rate the state has experienced since 1980, there will be an additional 35,000 new drivers in the state each year solely due to population growth.
12. **Unfunded Mandates.** SCDOT is funded separately from other state agencies. When the Legislature votes to increase salaries or benefits for state employees, or when new technologies and processes are mandated such as SCEIS, or when dollars are shifted away from highway funding such as the \$2 per vehicle registration fee that was placed in the license tag replacement fund, or when statutory provisos are created requiring special reports or other actions, or when highway revenues are used to balance the General Fund such as the \$25 million used to pay Hurricane Hugo debt or the \$10 million shifted as a result of revenue shortfalls in 2010, SCDOT must absorb the resulting costs. Even when initial funding is provided such as the recent requirement that non-facility rest areas be opened for use as parking areas for truckers, there is a tendency for the Legislature to gradually shift the financial burden to the SHF. For example, the state Mass Transit office was housed in the Governor’s Office until 1982 where it was funded with \$1.3 million in annually recurring General Fund appropriations. Today, the General Fund appropriation has shrunk to \$57,000 and the state-source revenues for transit come almost totally from the SHF. Between 1965 and 2000, state-source highway funding grew at less than one-third the growth rate of the State General Fund,<sup>2/16</sup> yet the agency had to absorb operational mandates as if the growth was consistent. This seems to be an unintentional by-product of the budgeting process which does not require periodic reviews of highway funding. With the recent decline in motor fuel revenues, the gap between SHF and General Fund revenue growth is predicted to widen, thereby weakening SCDOT’s ability to meet the state’s needs.

13. **Anti-tax sentiment.** For the past quarter-century, the anti-tax movement has continued to gain strength across America. This sentiment has been manifested formally through the Taxpayer Protection Pledge of the Americans for Tax Reform and informally through the Tea Party Movement, whose goal is to reduce overall government spending and taxes regardless of individual program needs. This staunch political sentiment puts transportation funding in direct competition with other programs despite the fact that transportation has historically been funded separately. In South Carolina, the Governor, 29 House members and 14 Senators have signed the Taxpayer Protection Pledge, stating that they “will oppose and vote against any and all efforts to increase taxes.”<sup>2/17</sup>
14. **Size of the State Highway System and Limitations on Home Rule.** In 1975, the South Carolina Constitution was amended to provide for “Home Rule.” This established county councils independent of the legislative delegations in every county of the state. Prior to that time, the delegations were primarily responsible for government policy and administration in the state’s 46 counties. Even after the implementation of Home Rule, the delegations continued to control the C-Fund, which had been used since 1946 to pave and construct thousands of miles of secondary roads throughout the state. In the 1990’s, the County Transportation Committees (CTC’s) were created to control the expenditure of C-Fund dollars, and the Legislature voted to allow the use of C-Fund dollars on locally-maintained roads. In 1994, the SCDOT Commission put a mileage cap on the state secondary system. By then, the State Highway System had grown to more than 41,000 miles, putting South Carolina at odds with the national average which places only 19% of miles under state ownership. In South Carolina, the state level of ownership is more than three times the national average, making it difficult to adequately maintain the system while simultaneously holding state-source highway user fee rates below the national average. Efforts have been made to transfer state roads to local government, but local funding for highway maintenance is limited by the statutory and constitutional constraints associated with Home Rule. In a report published by the Strom Thurmond Institute of Government and Publics Affairs, the authors state “Since 1976 the General Assembly has regularly enacted bills that expanded, reduced or redefined the powers of local government.”<sup>2/18</sup> This includes caps on millage rates.
15. **Fragmentation of Governance.** As shown on page 3 of this report, state-source highway funding is divided among four separate programs and governed by 48 different boards, committees and commissions. Additionally, projects funded through local-option sales taxes are selected and funded by local authorities. Yet, because of its expertise, SCDOT is responsible for administering most projects even if they have been selected and funded by other organizations. This often creates a flawed public perception. Projects can be seen

as SCDOT projects even though SCDOT had nothing to do with the selection process. Additionally, fragmentation makes coordination and prioritization difficult with 48 different groups deciding how to spend money on a state highway system that is, by law, under the authority of one agency -SCDOT.

16. **Lack of Knowledge.** Many taxpayers do not understand the “user fee” concept or the fact that user fees collected per gallon do not grow with inflation. Consequently, there is a belief, among some taxpayers, that sufficient transportation funding is on “auto-pilot” and that any lack of performance is simply the result of poor management. This public response can have political implications unless elected officials refute it.

Fuel taxes were stable and growing for eighty years, but in recent years, stagnant revenues have been the rule. Meanwhile, the shortfall in funding gets bigger as the gap between revenue growth and inflation widens. Addressing this shortfall will require a holistic revamping of South Carolina’s highway finance mechanism, including shifts in long-held policy presumptions.

## POTENTIAL REVENUE ENHANCEMENTS

The Task Force does not intend to recommend one source of revenue over another. This is a policy decision for the Governor and the General Assembly. However, the Task Force believes that the diversification of revenue sources will be critical to the future viability of South Carolina’s transportation system. Because of this, the Task Force has identified several potential revenue sources that elected officials might consider adding or enhancing to the revenue mix needed to meet the state’s enormous transportation funding challenge. Options abound as one looks around the country for alternative transportation funding sources. Some of those options are listed below.

1. **User Fee on Motor Fuel.** This per-gallon excise tax is defined in the SC Code as a “Motor Fuel User Fee,” and as such, is levied specifically as a fee for the use of the state’s highways. This fee is the most widely used highway revenue source both on a state and federal levels. It currently represents 35% of all state-source highway revenue (nationally) and 65% of federal highway revenue. It has low administrative costs (less than 2%) and is electronically accountable. However, it is a static fee that does not self-adjust for inflation like income taxes and sales taxes (see Indexing below). South Carolina’s current levy of 16.75¢ per gallon is fourth lowest in the nation and was last raised in 1987 by 3 cents. The SC rate is about half what is charged in NC and GA. The federal fee is 18.4¢ on gasoline, and 24.4¢ on diesel fuel. Approximately 30-40% of the revenue derived from South Carolina’s user fee is from out-of-state users.
2. **Indexing and Removing the Sales Tax Exemption.** As stated above, excise taxes such as per-gallon motor fuel user fees, do not automatically grow with inflation. To overcome this, many states have indexed all or part of their motor

fuel taxes to some moving standard such as the wholesale price of fuel, the retail price of fuel, or the CPI. Both of our neighboring states have done so. This concept has sometimes been tied to the idea of removing the South Carolina sales tax exemption from motor fuels, which would annually generate an estimated \$698,848,578.<sup>2/19</sup> This could be accomplished by collecting the sales tax at the supplier level based on a periodic average of fuel prices. If South Carolina chose any form of indexing, it would be important that no new collection mechanism be created, thus affecting administrative costs. (In South Carolina, motor fuel user fees are collected “at the rack,” i.e. on the supplier level. So, it would make sense to similarly apply an indexed rate on the supplier level. Most states have applied their indexed rates bi-annually, based on a rolling average. For example, North Carolina determines the rate based on the six-month rolling average of wholesale gasoline and diesel prices. Effective August 1, 1989 the N.C. motor fuel user fee was set at 17 cents per gallon plus 7% of the average wholesale price. This is adjusted in January and July of each year.) An index tied to the National Highway Construction Cost Index, published by the Federal Highway Administration, calculated and adjusted on a per-gallon basis would provide a directly-related index to highway use, while providing a stable yet inevitably increasing revenue stream.

3. **Drivers License Fees.** The fee for a South Carolina Driver’s License is currently \$2.50 per year. This is the lowest such fee in the southeast. The southeastern average annualized rate for a standard adult driver’s license, excluding South Carolina, is \$4.39.<sup>2/20</sup> The South Carolina fee has remained the same since January of 1995, however a ten-year renewal option was later added which had a very small positive impact on revenues. There are approximately 3.3 million licensed drivers in South Carolina, so each dollar charged generates roughly \$3.3 million per year.
4. **Automobile Registration Fees.** The annualized registration fee for passenger automobiles in South Carolina is \$12.00. The fee was lowered to \$12.00 from \$17.00 in 1987 and has remained at that rate for twenty-five years. There are roughly 2 million registered automobiles in South Carolina, so each dollar charged generates about \$2 million per year.
5. **Truck Registration Fees.** There are 1.6 million registered trucks in South Carolina. Annual registration fees are based primarily on a weight scale ranging from \$15 for 4,000 lbs. to \$800 for 80,000 lbs. Annual statewide revenues are currently about \$60 million, so each 10% increase in fees would generate approximately \$6 million per year.
6. **Electric Power Tax.** Since 2005, the State of South Carolina has dedicated a portion of the state electric power tax (SC Code Section 12-23-10) to highways. The current rate is five-tenths of one mill upon each kilowatt hour. Revenue growth has been approximately 20% since 2005, averaging almost 3% per year. An increase in the tax of one-tenth of one mill upon

each kilowatt hour would generate approximately \$5.6 million per year.

7. **Tolls.** According to the Federal Highway Administration's national listing, there are currently toll facilities in 37 states. Many of these are bridges. The largest numbers of facilities are in the northeast, in Florida and in California. Current federal law prohibits the imposition of tolls on existing Interstates, but the new transportation authorization act, MAP-21, allows new lanes to be tolled if existing lanes remain toll-free. Additionally, South Carolina state law requires specific legislative approval for the tolling of Interstates. There are currently two toll facilities in South Carolina. One is state-operated and one is privately operated. Tolls are best suited for high-volume facilities where operational overhead costs can be reasonably covered. Most of the twenty-year needs outlined in SCDOT's "Getting to Good" scenario are either maintenance oriented, or localized upgrades unlikely to be suitable for tolling. Consequently, tolls should be seen as a viable alternative for major "green field" projects, but not as a "cure-all" for highway funding.
8. **Public-Private Partnerships (PPPs).** PPPs are contractual arrangements whereby a government facility or service is funded and operated through a partnership of government and one or more private sector companies. Highway PPPs usually involve the assignment of tolling authority and other concessions in exchange for up-front financing which limits the financial liabilities of the state. South Carolina law allows PPPs, but the law is in need of refinement. As with tolling, PPP offers a viable funding alternative for specific projects, but it should not be viewed as a "cure-all" for highway funding.
9. **User Fee on Vehicle Purchases.** South Carolina currently has a 5% sales tax on vehicle purchases, with a \$300 cap. This generates roughly \$100,000,000 per year. None of this revenue is currently dedicated to the State Highway Fund. Many states use vehicle sales revenue for highway funding, but tax rates and tax caps vary. South Carolina is the only state with a \$300 cap. The Board of Economic Advisors (BEA) has issued revenue estimates for raising the cap and either leaving the 5% tax rate in place or lowering the tax rate. Completely removing the cap and leaving the 5% rate in place would generate \$160,000,000 in new revenue<sup>2/21</sup> and reducing the rate to 3% fee with no cap would generate an estimated \$30 million in new annual revenue.<sup>2/22</sup>
10. **General Fund Revenues.** Many states, as well as the federal government, are supplementing their highway programs with general fund dollars. This is especially appropriate with non-recurring General Fund revenues because good public policy has always dictated that non-recurring revenues, including budget surpluses and unexpected windfalls, should be used for non-recurring expenses such as capital improvements. The South Carolina General Assembly has appropriated General Fund dollars for specific transportation purposes, but

lawmakers have shown a reluctance to depend upon General Fund revenues for highways. In some states, such as Virginia and Mississippi, a portion of the state sales tax is actually dedicated to highways. One-seventh of total statewide sales tax receipts in Virginia is dedicated to the State Highway Fund.<sup>2/23</sup> If traditional recurring General Fund revenues are shifted to SCDOT, they should likewise be dedicated and set aside prior to the appropriations process rather than being annually appropriated. Dedicated funding allows the agency to anticipate and plan projects over a number of years, including preliminary design, environmental permitting, right-of-way acquisition and construction. Based on current General Fund revenues, a 1% set-aside would generate about \$60 million per year.

11. **Insurance Premium Safety Surcharge.** According to the Federal Highway Administration, the per-person cost of traffic fatalities in 2005 dollars was \$3.2 million and \$68,170 for injuries. The American Automobile Association (AAA) estimates the national cost of traffic crashes to be \$299.5 billion (\$976 per capita).<sup>2/24</sup> Costs include medical, emergency services, police services, property damage, lost productivity, and quality of life. "Traffic Safety Facts – South Carolina 2006-2010," published by the National Highway Traffic Safety Administration (NHTSA) indicates that South Carolina's rate of fatalities per miles traveled is 49% higher than the national average and nearly three times higher than the best state.<sup>2/25</sup> While much of the blame falls on behavioral and physical causes, a certain amount of improvement can be achieved through safer, more forgiving, highway design. SCDOT predicts the 20-year shortfall in funding for safety upgrades to be \$1 billion. There are 3.7 million insured vehicles in South Carolina. A safety surcharge of \$1 per month on each insured vehicle, minus an administrative fee of 5% to be paid to the insurance companies, could generate approximately \$42 million per year for highway safety improvements.
12. **Encroachment Permit Fees.** SCDOT issued 7,911 encroachment permits in 2011. These encroachments, often referred to as "curb cuts," impact traffic flow and the permit process creates administrative costs for the agency. Currently, SCDOT is not allowed by law to charge a fee for encroachment permits. If empowered to do so, a schedule of rates would have to be developed based on the various types of encroachment.
13. **Alternative Fuel Vehicle User Fees.** Technologies such as hydrogen fuel cells, electric lithium-ion cell batteries, and compressed natural gas (CNG) are continually being introduced into the automotive world. The South Carolina "Back-Up Tax" found in SC Code Section 12-28-970 requires that suppliers of alternative fuels submit payment of user fees in an amount equal to the user fee on other motor fuels. This can be problematic due to unclear conversion rates and imprecise tracking data. Yet, vehicles utilizing these alternative



fuels are using the highways just as traditional motor fuel powered vehicles do. According to a report issued by the U.S. Energy Information Administration in June, 2012, alternative fuel vehicles could have a nearly 50% market share by 2035.<sup>2/26</sup> This trend will be particularly true for CNG vehicles because the price of natural gas has fallen well below the price of crude oil on the basis of BTU value. The nation's largest producer of CNG conversion kits recently announced that, during the first half of 2012, orders for its CNG fuel systems increased nearly four-fold compared to orders received during the same period in 2011. There are several methods that might be used to assess a user fee for alternative fuel vehicles, including a point-of-purchase fee, an annual sticker, or a VMT fee (see below).

14. **Vehicle Miles Traveled (VMT) fees.** As part of the National Cooperative Highway Research Program (NCHRP), the federal government is studying the viability of a Mileage Based User Fee (MBUF). In an earlier study, a GPS based system in Oregon showed that a mileage fee could be implemented to replace the gas tax as the principal revenue source for road funding. Select Oregon motorists (280 citizens) in the Portland area were charged a fee based on miles travelled in lieu of the 24¢/gallon state tax. This mileage based road pricing was a year-long experiment under the federal Value Pricing Pilot Program. According to ODOT, this would not be implemented anytime soon, but within the next decade. Among the challenges are the need for interstate cooperation and the need to provide the means for incremental collections. The Task Force does not recommend immediate action for the State of South Carolina, but the state must be prepared to act if/when a national standard is created.
15. **Severance Taxes.** This revenue source is levied in the form of excise taxes on fossil fuels extracted from the earth. These fuels typically include oil, natural gas and coal. Seventeen states have severance taxes. Arkansas and New Mexico have dedicated 100% of their severance tax revenues to highway funding. Wyoming and Oklahoma each dedicate roughly 10% of their severance tax revenues to state and local roads, and Tennessee dedicates the entire severance tax on coal to county roads.<sup>2/27</sup> Several other states use a portion of severance tax revenues for highways.
16. **Rental Car Fees.** According to information published by the American Car Rental Association, "since 1990, more than 115 special rental car taxes have been enacted in 43 states and the District of Columbia."<sup>2/28</sup> South Carolina does not charge a state fee on car rentals. Such a fee could actually apply to numerous types of service contracts such as towing and emergency road service. Some states charge a flat fee per day while others charge based on a percentage of the rental fee.
17. **User Fees for Electric and Non-Motorized Vehicles.** Electric (battery operated) vehicles are becoming popular. If the user fee concept is to continue, a method of collection will have to be devised for electric vehicles. A recent presentation

by the Rand Corporation<sup>2/29</sup> concludes that a Mileage Based User Fee (MBUF), which can be applied to all types of trucks and passenger vehicles, is the most likely revenue source to eventually replace the motor fuel user fee. A MBUF for electric vehicles might be the first application of this concept. Other alternatives for electric vehicles include annual registration fees, insurance premium surcharges and point-of-purchase fees. Additionally, there is no user fee for golf carts which are now allowed on South Carolina roads. Similarly, bicycles do not pay a user fee despite the Highway Fund investments the state is making in bicycle lanes and bike paths. No state has yet imposed a "Bicycle User Fee," but in a May, 2012 report to Oregon Governor John Kitzhaber, prepared by Economic & Planning Systems, Inc. and Smart Growth America with financial support from the Rockefeller Foundation, a recommendation was included to create a user fee for bikes. The proposed fee would function as a "tax on bicycle operation and purchase dedicated to non-roadway transportation (e.g. bicycle license tax)."<sup>2/30</sup>

18. **Turn-back Program.** In the absence of sufficient state-level funding, the General Assembly might consider creating incentives for local governments to assume ownership of many of the state's secondary roads, particularly those roads that serve little or no statewide or national purpose. Examples of this would be subdivision streets, cemetery roads and schoolyard driveways that are currently in the state highway system. Because of the state's ownership of such roads, there is a disconnect between SCDOT's high maintenance responsibilities and the General Assembly's desire to have low tax rates. As pointed out earlier in this report, SCDOT's responsibilities are almost four times the national average while SCDOT's funding is largely dependent on motor fuel revenues and the state's user fee on motor fuels is the fourth lowest in the nation.

It is the recommendation of the Task Force that the Governor and the General Assembly consider the above revenue sources, and others, and that a conscious effort be made to broaden the revenue base for highways as we move into the future. A diverse revenue base is less likely to fall behind inflation than a revenue base, such as our current model, tied heavily to motor fuels.

## CONSEQUENCES OF INACTION

The people of South Carolina have made a substantial investment in the state's transportation system since the creation of the State Highway Department in 1917. Estimates place the replacement value at more than \$320 billion.<sup>2/31</sup> The state-owned highway system is comprised of a huge collection of assets, including 139,000 lane miles, more than 8,300 bridges, 550,000 traffic signs, 28 welcome centers and rest areas, 70 million square feet of sidewalk, and many other components.

As with any capital investment, maintenance must be performed, or value will be lost. Highway maintenance is often taken for granted.

Yet, when funds are in short supply, maintenance must take priority in order to protect the state's investment because deferred maintenance becomes exponentially more expensive as time goes by. Those costs are reflected in government funding backlogs and in the pocketbooks of private sector businesses and individuals through increased vehicle repairs and lost productivity.

According to a 2010 study by The U.S. Public Interest Research Group (PIRG) Education Fund,<sup>2/32</sup> reconstructing a road after 25 years of neglect can cost more than three times the amount needed to preserve the road in good condition over the same time period. That study concluded that political pressure in federal and state transportation programs encourages the construction of new and wider highways and bridges, to the detriment of maintenance activities that will preserve the existing infrastructure.

In South Carolina, there has been a debate between construction and maintenance proponents, with one group saying the state is using all its resources for construction and ignoring maintenance needs, while the other group complains that too much funding is aimed at the existing system with no regard for new construction needed for congestion relief and economic expansion. Based on discussion and testimony provided to the Task Force, the truth is that South Carolina has been unable to meet its construction or maintenance needs because of inadequate funding over an extended period of time. The opposing sides seem unable to see that they are "fighting over crumbs."

Secretary of Transportation Robert St. Onge told the Task Force that, without adequate financial resources, his job in the coming years will be simply to "manage the decline of the highway system." This frank statement represents a somber truth that cannot be ignored. The consequences of inaction are clear and predictable: deterioration of roads and bridges; reduced highway safety; the posting or closing of bridges; increased traffic congestion; increased vehicle upkeep; and, a loss of economic competitiveness. Secondary roads with low traffic volumes may have to be returned to "tar and gravel" status. If the decline is allowed to continue, congestion and load restrictions will result in irreparable damage to the state's economy. Consequently, the cost of "Getting to Good" will become unattainable and the quality of life for all South Carolinians will suffer.

Act 114 of 2007 established requirements for setting priorities in the allocation of state resources for highway improvements. While no formula is perfect, the South Carolina prioritization process is now recognized for identifying needs and allocating resources. But this attempt at quantifying needs and setting priorities through an empirical process will be of little value if South Carolina continues to underfund one of its most valuable assets, its state highway system.

---end---

## Addendum 1: Roster

### South Carolina Department of Transportation Commission

#### TRANSPORTATION INFRASTRUCTURE TASK FORCE ROSTER

#### **CRAIG FORREST, TASK FORCE CHAIRMAN**

*Representing the SCDOT Commission*

#### **Robert Bartlett**

Former Pennsylvania Secretary  
of Transportation

#### **Deborah Bass**

Former Executive Director  
South Carolina Alliance to Fix  
Our Roads

#### **Roger DeCaigny**

Hilton Head Greater Island  
Council

#### **William DuBose**

SC Concrete Pavement  
Association

#### **Scott Fant**

Sloan Construction Company  
Representing Carolinas AGC

#### **Blake Hodge**

Director of Public Works  
Hampton County

#### **Matt Jolliff**

Hanson Aggregates, Inc.  
Representing the Mining  
Association of SC

#### **Joe Jones**

Executive Director  
SC Society of  
Professional Engineers, and  
The American Council of  
Engineering Companies (ACEC)  
of South Carolina

#### **Ron Joye**

LLC Consulting Services

#### **Jeff Lord**

Walterboro City Manager

#### **Mike Meyer**

Hampton County Director  
of Finance

#### **Bill Ross**

Executive Director  
South Carolina Alliance to Fix  
Our Roads

#### **Rick Todd**

President  
South Carolina Trucking  
Association

#### **Ken Willingham**

Thompson Trucking Company,  
and former SCDOT  
Commissioner

Staff Support: Michael Covington

*SCDOT Government Relations Office*



## Addendum 2: Footnotes and References

Footnote #	Topic	Source
2/1	Level of states' responsibility	Federal Highway Administration Highway Statistics 2009, Table HM-10 "Public Road Length – Miles by Ownership." February, 2012
2/2	Federal portion of states' budgets	Federal Highway Administration Highway Statistics 2010 Table HF-10 "Funding for Highways and Disposition of Highway-User Revenues." March, 2012
2/3	Federal dependence on for motor fuels	H.R. 4348 "Moving Ahead Progress in the 21st Century (MAP-21)," Fiscal 2013-14 funding sources.
2/4	revenues used by states	1. Federal Highway Administration Highway Statistics 2010 Table SF-1 "Revenues Used By States for Highways," excluding non-recurring dollars such as bonds and carry-forwards; 2. FY'13 Federal Apportionment for SC; and, 3. SCDOT annualized estimates.
2/5	inflation calculation	Minneapolis Federal Reserve Bank, inflation calculator - <a href="http://www.minneapolisfed.org/">http://www.minneapolisfed.org/</a>
2/6	national fleet MPG	Research and Innovative Technology Administration, Bureau of Transportation Statistics, Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles
2/7	future fuel economy	"The Fuel Tax and Alternatives for Transportation Funding: Special Report 285" published by the National Academy of Sciences.
2/8	reduced fuel consumption	"Fueling America: A Snapshot of Key Facts and
2/9	historical fuel prices	US Energy Information Administration data used for historical data. American Automobile Association (AAA) Daily Fuel Gauge Report used for current data (August 3, 2012). <a href="http://www.fuelgaugereport.aaa.com/">http://www.fuelgaugereport.aaa.com/</a>
2/10	average age of bridges	SCDOT Office of Bridge Maintenance
2/11	resurfacing cycle	SCDOT Maintenance Office and SCDOT Construction Office
2/12	SC traffic growth 1985-2011	SCDOT Office of Road Data Services
2/13	Growth in lane miles - Southeast	Federal Highway Administration, Highway Statistics Series, Functional System Data; Estimated Lane-Length – 1987 and 2010 [Table HM-60]. Southeast defined as: AL, FL, GA, MS, NC, SC, TN, VA, and WV.
2/14	Truck freight tonnage in SC	"Highways, Transportation and Distribution Issues 2011," South Carolina Trucking Association
2/15	economic impact of freight	"Economic Effects of Transportation: The Freight Story – Final Report" published by the Federal Highway Administration January 2002.
2/16	highway funding vs Gen Fund	"State Transportation Funding Trends and Comparative State Assessment – Transportation funding Series Special Report No. 2" by James b. London, et al., the Jim Self Center

		on the Future, The Strom Thurmond Institute of Government and Public Affairs, Clemson University, December, 2002.	2/22	3% auto sales tax estimate	Based on an estimate of \$29.4 million by the state Board of Economic Advisors on January 29, 2008.
2/17	Taxpayer Protection Pledge	Americans for Tax Reform <a href="http://s3.amazonaws.com/atrfiles/files/files/State%20Taxpayer%20Protection%20Pledge%20List_CURRENT_2012(8).pdf">http://s3.amazonaws.com/atrfiles/files/files/State%20Taxpayer%20Protection%20Pledge%20List_CURRENT_2012(8).pdf</a>	2/23	Virginia Sales Tax	Federal Highway Administration, Highway Statistics Series 2008, Provisions Governing the Allocation for Highway Purposes of Certain State Taxes, Fees, and Appropriations, Table S-106.
2/18	Legislative limits on "Home Rule"	"Local Governments and Home Rule in South Carolina – A Citizens Guide" published by the Strom Thurmond Institute of Government and Public Affairs, Clemson University, June, 2004.	2/24	Cost of traffic crashes	"Crashes vs. Congestion – What's the Cost to Society?" published by the American Automobile Association (AAA), November 3, 2011.
2/19	Removing Sales Tax Exemption	Based on an estimate in "Sales Tax and Use Tax Exemptions/Exclusions FY 2012-13" published by the state Board of Economic Advisors. Revenue from SC Code Sections 12-36-2120(15) (a), excluding Off-Road fuel. <a href="http://www.bcb.sc.gov/BCB/bea/BCB-bea-tax-reports.phtm">http://www.bcb.sc.gov/BCB/bea/BCB-bea-tax-reports.phtm</a>	2/25	Fatality rates	"Traffic Safety Facts – South Carolina 2006-2010" published by the National Highway Traffic Safety Administration. Chart on "Fatality Rates: South Carolina, U.S. and Best State," page 4.
2/20	Southeast Drivers License Fees	SCDOT Research based on the following annualized rates for adult drivers licenses: AL \$5.88; FL \$6.00; GA \$3.50; MS \$5.21; NC \$4.00; SC \$2.50; TN \$3.50; VA \$4.00; WV \$3.00.	2/26	Predicted growth of AFV's	"Annual Energy Outlooks 2012 – with Projections to 2035," published by the U.S. Energy Information Administration. <a href="http://www.eia.gov/forecasts/aeo/pdf/0383(2012).pdf">www.eia.gov/forecasts/aeo/pdf/0383(2012).pdf</a>
2/21	5% auto sales tax estimate	Based on an estimate in "Sales Tax and Use Tax Exemptions/Exclusions FY 2012-13" published by the state Board of Economic Advisors. Includes revenue from SC Code Sections 12-36-2110(A)(2), (A)(3), (A)(5) and (A)(6). <a href="http://www.bcb.sc.gov/BCB/bea/BCB-bea-tax-reports.phtm">http://www.bcb.sc.gov/BCB/bea/BCB-bea-tax-reports.phtm</a>	2/27	State Severance Taxes	"Wyoming Severance Taxes and Federal Mineral Royalties" by Dean Temte Senior Legislative Analyst Wyoming Legislative Service Office Updated July 2010, and FHWA Highway Statistics 2008 Table S-106.
			2/28	Rental Car Taxes	Draft "Hill Two Pager," the American Rental Car Association, January 5, 2011. <a href="http://server9.fusednetwork.com/~acraorg/wp-content/uploads/2011/01/hr4175.pdf">http://server9.fusednetwork.com/~acraorg/wp-content/uploads/2011/01/hr4175.pdf</a>

2/29	MBUF Policy Discussion	<p>“Transportation Tax Policies for Electric Vehicles: Revenue Impacts and Options” by Martin Wachs of the Rand Corporation and the UCLA Department of Urban Planning, from a presentation to the Center for Climate and Energy Solutions, Arlington, VA. <a href="http://www.c2es.org/docUploads/berkeley-workshop-ev-policies-fleets.pdf">http://www.c2es.org/docUploads/berkeley-workshop-ev-policies-fleets.pdf</a></p>
2/30	Bicycle User Fee	<p>“Oregon Non-Roadway Transportation Funding Options: Report to the Governor,” Published May 24, 2012. <a href="http://bikeportland.org/wp-content/uploads/2012/05/Non-Roadway_FINAL_REPORT52912.pdf">http://bikeportland.org/wp-content/uploads/2012/05/Non-Roadway_FINAL_REPORT52912.pdf</a></p>
2/31	Replacement value of system	<p>Estimate prepared by SCDOT Office of Governmental Relations, based on new construction costs of Interstate lane miles, non-Interstate lane miles, Interstate interchanges, bridges, traffic signs, welcome centers, Interstate rest areas, driveway entrances, sidewalks, guardrail, traffic signals, offices, storage facilities, maintenance sheds, and IT investments.</p>
2/32	Reconstruction vs. preservation	<p>“Road Work Ahead – Holding Government Accountable for Fixing America’s Crumbling Roads and Bridges” published by U.S. PIRG Education Fund, by Travis Madsen, Benjamin Davis and Phineas Baxandall, PhD. April 2010</p>

### Addendum 3: Acronyms used in this report

AAA	American Automobile Association
BEA	The South Carolina Board of Economic Advisors
BTU	British Thermal Unit
CAFE	The federal Corporate Average Fuel Economy standard.
C-Fund	A highway funding program for local and state roads. It is controlled by 46 separate County Transportation Committees (CTC’s)
CNG	Compressed Natural Gas
CPI	The Consumer Price Index published by the U.S. Bureau of Labor Statistics
CTC	County Transportation Committee (responsible for the C-Fund)
ENR	The Engineering News Record, published by McGraw-Hill
FHWA	The Federal Highway Administration. A component of the U.S. Department of Transportation (USDOT)
GPS	Global Positioning System
HTF	The federal Highway Trust Fund
MAP-21	The current federal transportation authorization act, “Moving Ahead for Progress in the 21st Century”
MBUF	Mileage Based User Fee
NCHRP	National Cooperative Highway Research Program
NFAHA	The Non-Federal Aid Highway Account of South Carolina
NHTSA	National Highway Traffic Safety Administration
ODOT	Oregon Department of Transportation
OPEC	Organization of the Petroleum Exporting Countries
PIRG	The U.S. Public Interest Research Group
PPP	Public-Private Partnership
RFS	The Renewable Fuel Standard enforced by the U.S. Environmental Protection Agency (EPA)
SCDOT	The South Carolina Department of Transportation
SCEIS	The South Carolina Enterprise Information System
SCTIB	The South Carolina State Transportation Infrastructure Bank
SHF	The State Highway Fund of South Carolina
USDOT	United States Department of Transportation
VMT	Vehicle Miles Travelled

