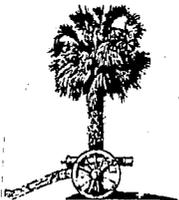
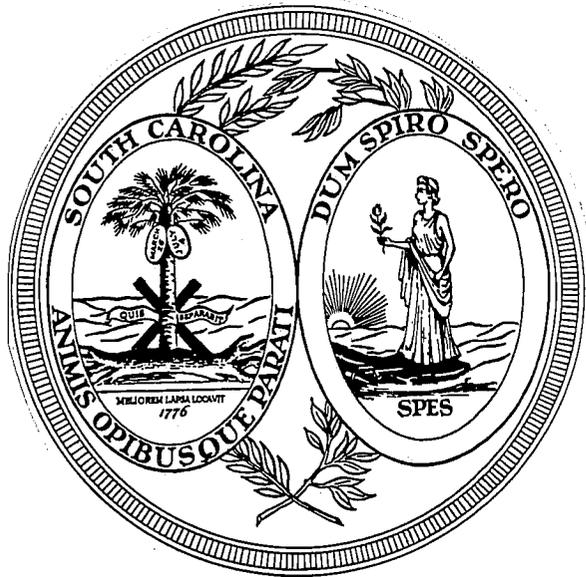


**LAC**

**Report to the General Assembly**

April 1993

**A Review of  
State Government  
Motor Vehicle  
Resources**



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# Legislative Audit Council

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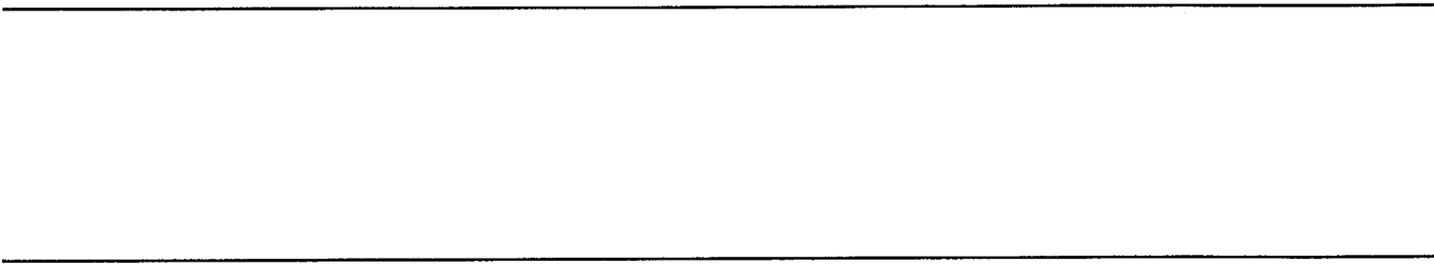
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**LAC**

**Report to the General Assembly**

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**A Review of  
State Government  
Motor Vehicle  
Resources**



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# Executive Summary

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## Introduction

<b>Objectives of the Motor Vehicle Management Act</b>
Achieve maximum cost-effective management of state-owned motor vehicles in support of the established missions and objectives of the agencies, boards, and commissions.
Eliminate unofficial and unauthorized use of state vehicles.
Minimize individual assignment of state vehicles.
Eliminate reimbursable use of personal vehicles for accomplishment of official travel when this use is more costly than the use of state vehicles.
Acquire motor vehicles offering optimum energy efficiency for the tasks performed.
Ensure motor vehicles are operated in a safe manner in accordance with the statewide fleet safety program.

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In 1978, the Division of Motor Vehicle Management (DMVM) was created as a division of the Budget and Control Board to assume supervision of the state's motor vehicle fleet and make recommendations to the board relative to agencies' compliance with the law. The Motor Vehicle Management Act, codified at §1-11-220 through §1-11-350 of the South Carolina Code of Laws, contains six objectives which reflect the General Assembly's intent to control costs and require accountability in the management of the state's motor vehicle resources.

In FY 90-91 the state vehicle fleet consisted of more than 20,000 vehicles (including school buses and service vehicles operated by the State Department of Education), with an acquisition value of over \$160 million. In FY 90-91, the state purchased 1,650 vehicles (233 were fleet additions and 1,417 were replacement vehicles) at an approximate cost of \$20.7 million. DMVM estimates that the cost statewide of motor vehicle use and travel exceeds \$88 million annually.

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## Waste and Duplication in the Use of State Motor Vehicle Resources: A System Without Accountability

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In spite of the efforts of DMVM and reports made over the years about waste, this report confirms that state agencies are wasting funds in the area of state motor vehicle operations and the state does not control this waste. Objectives of the Motor Vehicle Management Act were intended to control costs and require accountability from state agencies in the use of state motor vehicle resources. However, tenets of the act cannot be achieved because the act does not provide for central control by the fleet manager. The current system places the fleet manager in an ancillary role with no authority to manage when or how agencies use the fleet or whether they open unnecessary maintenance facilities. Actual control over the fleet rests in the hands of agency heads which has resulted in serious waste of limited state resources.

Areas for Savings	Estimated Annual Savings
Contract for fleet maintenance	\$7.63 million*
Use centralized purchasing	A portion of \$15.4 million
Amend SDE mechanic staff practices	A portion of \$2 million
Reduce SCDHPT mechanic staff	\$1.2 million
Use vehicles more efficiently	\$800,000 to \$1.5 million
Downsize fleet	\$279,000
Eliminate commuting	\$250,000
Eliminate spare highway patrol vehicles	\$141,000
Eliminate SLED commuting miles	\$130,000

\* Estimated savings are based on average savings in the five governmental entities we reviewed (see p. 6). State savings may involve other factors such as the proximity of maintenance facilities. These considerations could increase/decrease estimated state savings.

Our report demonstrates that there is waste and duplication, resulting in excessive state expenditures, both in the area of maintenance as well as in the use of the fleet:

- State agencies have established maintenance facilities which duplicate existing facilities, both state and private, without justification. State agencies have not considered less expensive and more efficient alternatives to the current maintenance system.
- Millions of dollars are expended by agencies each year to replace vehicles when fleets are currently underutilized, and to maintain larger than necessary fleets both in size and composition.
- While allowing their fleets to be underutilized, state agencies pay to reimburse employees for the use of their personal vehicles.
- Contributing to the problem of underutilizing is agency heads authorizing the permanent assignment rather than general use of vehicles. These vehicles are allowed to be used for commuting, and many do not meet the minimum mileage test established by DMVM.

Management of the fleet is diffused and enforcement decisions rest with the Budget and Control Board. In December 1990, the Budget and Control Board, to whom the fleet manager reports, stated, in clarifying the fleet manager's role, ". . . major policy decisions or actions . . ." still must be brought before the board. Although the fleet manager has reported frequently to the Budget and Control Board agency failure to be accountable in the management of state motor vehicle resources, no direct action has been taken by the board or penalties established as provided for in §1-11-260 of the South Carolina Code of Laws.

Since 1972 reports on motor vehicle resources have warned of waste and, poor management of resources and have recommended decreasing the personal assignment and personal use of state vehicles, decreasing use of personal vehicles for business, downsizing of the fleet, and reduction in waste and duplication in maintenance facilities. The Governor's Management Review Commission in 1972 recommended decreasing permanent assignments, downsizing the fleet, requiring per-mile reimbursement to the state for personal use of state vehicles, and using the Department of Highways and Public Transportation (DHPT) and the State Department of Education (SDE) facilities for service and repair of state-owned vehicles.

In 1975, the Council of State Governments, at the request of the Budget and Control Board, recommended to the Budget and Control Board basic standards for the use, purchase, and personal assignment of state vehicles.

The report found:

- Vehicle standards (use) of various agencies ranged from extremely restrictive to very liberal.
- Proliferation in both the number and types of vehicle (status).
- Assignment of state-owned vehicles to individuals for exclusive use was widespread and rarely resulted in adequate and effective utilization in terms of cost and useable life expectancy.
- Need for the establishment of a viable, inter-agency, multi-purpose motor pool in the capital complex area.

Since 1980, DMVM has issued to the Budget and Control Board seven management review reports which contain by-agency data relative to compliance with the objectives of the Motor Vehicle Act. Also, beginning in 1978, the Legislative Audit Council issued six reports addressing agencies' compliance with the act.

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Since 1972, at least 15 studies of state vehicle resources have identified waste and recommended more cost-effective management.

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The following table is a comparison of statistics reported in 1981 and 1992 by DMVM to the Budget and Control Board in its first and seventh management reviews. These comparisons show:

- Increases in the numbers of employees who report commuting for income purposes.
- Increases in the percent of the fleet permanently assigned, and increases in privately-owned vehicle (POV) miles.
- Increases in the size of the fleet as it relates to the percent of full-size vehicles.

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**Table: DMVM Management Review Statistics**

Management Review	# Employees Reporting Commuting	% Fleet Permanently Assigned	# Miles That are POV	% Fleet Compact	% Fleet Mid-Size	% Fleet Full-Size
May 1981	393	3% <sup>a</sup>	47 million	27%	40%	28%
January 1992	568	8% <sup>b</sup>	52 million	30%	15%	52%

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a Some law enforcement vehicles included.

b Law enforcement vehicles not included.

The following major recommendation is based on all past reports and practices used in other states and may require legislative action.

**Major Recommendation**

The state fleet manager should be responsible for the overall management and ownership of the state passenger fleet including vehicle assignment and determination of maintenance and replacement needs. All passenger vehicles regardless of the source of funds from which they were purchased should be included.

All passenger vehicles should be leased from DMVM and the agencies billed for leases which should be competitive with the market rate. The state fleet manager should operate a central motor pool and branch central motor pools at other places within the state as deemed necessary by the state fleet manager.

The state fleet manager should initiate requests for proposals for test sites selected from SDE and SCDHPT maintenance facilities to determine the most cost-effective means to provide maintenance services. Where conversion is desired contractors should at the minimum be required to use existing maintenance facilities and provide a grace period or consideration for the employment of those persons formerly employed by the government entity.

Agencies should be required to review and rejustify passenger vehicle need via a zero base vehicle justification including the consideration of pooling, and reclassify vehicles per their specific transportation activities. Personal use of state vehicles should be prohibited unless an employee is in "official travel status." Based on analysis of this data, the state fleet manager should ask for return of excess vehicles to DMVM.

Agencies, as a part of the budget process, should be required to prepare a plan to be approved by DMVM on how to reduce or control the amount of POV reimbursement. Before establishing maintenance facilities, agencies should be required to submit plans as part of their budget request, to be approved by DMVM.

Agencies should on an annual basis be required to verify to DMVM whether or not they have met assignment and use criteria and whether mileage capacity is being efficiently utilized. If reports indicate an agency is using the fleet inefficiently, the state fleet manager should reassign vehicles to higher mileage situations. During an agency's management review, the state fleet manager should identify violations of the Motor Vehicle Act and may revoke assignment of vehicles in violation.

Vehicles should be identified with a statement that the vehicle belongs to a particular institution/agency of the state, should use non-expiring registration plates and bear the state seal.

DMVM should use negotiated contracts for purchasing of parts and maintenance and repair to the extent this is the most efficient and economical.

DMVM should develop an automated system of statewide vehicle data with information on use, maintenance, repair and replacement which would enable the development of accurate life-cycle cost information and allow for monitoring necessary to ensure maximum cost-effective use of the fleet.

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**Executive Summary**

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# Introduction

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## Audit Objectives

Proviso 3.55 of the FY 91-92 Appropriation Act requires the chairman of the Senate Finance Committee and the chairman of the House Ways and Means Committee to undertake a study of base budgets of agencies with similar functions. Pursuant to this mandate, in November 1991, we were requested to review state motor vehicle resources.

Our review was guided by three specific objectives posed by the committees:

- (1) Determine if any wasteful duplication exists among state-owned vehicle maintenance facilities statewide and make recommendations.
- (2) Identify any waste or inefficiency in the use of state-owned vehicles statewide and make recommendations.
- (3) Identify unnecessary or personal use of state-owned vehicles and make recommendations to eliminate unnecessary use.

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## Scope and Methodology

To determine if wasteful duplication exists among state-owned maintenance facilities, we compared optimum levels of mechanic staffing with actual statewide levels and reviewed purchasing practices for parts and supplies. We developed estimates of optimum staffing through surveys, meetings with agency officials, and a system used by the United States Air Force. We determined actual mechanic staffing through analysis of the official agency position descriptions for personnel assigned to maintenance operations. We compared our results to standards developed by the air force (see Appendix A).

In considering possible alternatives to our current maintenance system, we reviewed literature in the field and contacted county and city officials using alternative methods both inside and outside of South Carolina. We also surveyed various states, contacted the federal government, and reviewed agency records.

In order to identify inefficient and personal use of state vehicles, we sent out approximately 10,000 vehicle questionnaires and had a response rate of 94%. The questionnaire was developed in conjunction with a private consultant, state agency fleet management personnel, and LAC staff. We

analyzed information on the over 8,500 active passenger sedans, station wagons, vans, trucks, and police vehicles (see Appendix B). This information was used in different analyses throughout the report. We used the University of South Carolina's statistical laboratory to enter and develop reports on the data using analytical approaches developed by LAC staff and a private consultant. Due to the magnitude of data collected, we were able to perform only limited validation of responses. We also reviewed previous LAC reports and DMVM reviews.

To achieve our audit objectives, we relied on some computer-processed data from the various state agencies which we did not verify. However, when this data was viewed in context with other available evidence, we believe the opinions, conclusions, and recommendations in this report are valid.

The audit generally covers the time period FY 90-91 and FY 91-92 and was conducted in accordance with generally accepted government auditing standards.

# State Vehicle and Equipment Maintenance Facilities

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## Introduction

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The state operates 148 separate maintenance facilities at 27 different agencies for a cost of \$42 million annually.

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This chapter addresses state maintenance facilities and their costs. We discuss problems within the current state-operated system and alternatives available to the state which could reduce duplication and costs.

The South Carolina Budget and Control Board's Division of Motor Vehicle Management (DMVM) has defined state-owned vehicle maintenance facilities as:

A garage, building, or other facility where maintenance or repairs are performed on State vehicles, and which operates with the use of State funds, according to the authority granted by the State to all officers, departments, boards, commissions, divisions, institutions, universities, colleges and administrative units of State Government.

This definition applies to 148 separate operations, (excluding refueling operations) across the state at 27 different agencies (see Table 2.2). These facilities range from small shops with part-time mechanics to operations capable of most repair and maintenance functions.

According to information provided by the agencies, the state spends approximately \$42 million annually to operate these facilities. The single largest component of this cost, approximately \$24 million, is for personnel salaries and fringe benefits. This is followed by parts and supplies costs at around \$15 million. Operating costs for the physical installations (utilities, shop maintenance, etc., not including depreciation of plant and equipment) are approximately \$3.2 million, which suggests that combining facilities without personnel reductions would yield only minor immediate savings. In addition, the state expended approximately \$2.9 million with private providers in FY 90-91 for vehicle and equipment maintenance services.

Because the statewide accounting system does not separately report the costs of vehicle maintenance facilities, we asked the agencies to provide this information. The amounts reported represent average operating costs based on FY 90-91 and may not be the actual costs recorded in the accounting records of these agencies. In some cases allocations of costs were required. We did not review the underlying data or allocations for these amounts.

Required mechanic hours shown on Table 2.4 do not reflect maintenance provided by private vendors. We, therefore, based our analysis on a complete, state-provided, service program. The reader is advised that any

apparent under/over staffing could be influenced by the basis for our analysis as well as agency practices.

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## Alternative Delivery of Vehicle Maintenance Services

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According to federal guidelines, conversion from government sector to contract services should be sought were personal costs can be reduced by at least 10%.

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The Budget and Control Board has not determined if repair of state vehicles/equipment in state-operated facilities is the most cost-effective means to provide maintenance. However, in July 1989, DMVM executed a commercial vendor program where participating agencies call a "toll-free" number to receive instruction on where to have vehicles repaired or serviced (see p. 20). Although participation of state agencies in this program is limited, other commercial maintenance alternatives have not been explored by the board.

Section 1-11-290 of the South Carolina Code of Laws requires the Budget and Control Board in consultation with agencies operating maintenance facilities to study the cost effectiveness of these facilities relative to commercial alternatives. Further, the board is to develop a plan for "maximally cost-effective vehicle maintenance."

The United States Office of Management and Budget Circular A-76, relative to the federal government, states:

. . . the Government shall not start or carry on any activity to provide a commercial product or service if the product or service can be procured more economically from a commercial source.

According to the circular A-76 supplement, conversion from government sector to contract services based on economy should be sought in cases where at least 10% of the personnel costs can be saved. As we noted all state maintenance facilities are operated by "in-house" personnel at a cost of approximately \$24 million annually.

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## Contracting for Fleet Maintenance

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A review of literature concerning alternatives (contracting or vouchers) to government provided services showed that all levels of government have examined and/or implemented use of the private sector as a means to provide service in a more cost-effective and efficient manner. Contracting, an agreement between government and the private sector to provide a public service, was cited as the most common form of using the

private sector in state and local government. Further, fleet maintenance was cited as a feasible area for contracting.

Literature on privatization cited advantages including cost savings, improved service delivery, administrative efficiency, and a reduction in the size of government. Among the disadvantages cited were the loss of government control and jobs, and "lowballing" (unrealistic estimates to provide services) by the private sector.

Localities in South Carolina which contract with the private sector for fleet maintenance include the cities of Gaffney and Florence, and Horry, Orangeburg and Richland counties.

Many of the perceived disadvantages of privatization are addressed in South Carolina fleet maintenance contracts. In general, these contracts provide monitoring by the applicable government unit; a grace period or consideration for the employment of those persons formerly employed by the government entity; a performance bond at least equal to the contract amount in the event of a breach of contract; and contractor responsibility for costs exceeding the contract, except in the case of fleet additions or unusual changes which are not the fault of the contractor. Finally, in all instances in South Carolina where fleet maintenance is contracted, the contractor uses the maintenance facility of the applicable entity. This provides a safeguard in the event that the contract does not prove satisfactory. A summary of fleet maintenance contracts in South Carolina and annual savings is provided below.

Table 2.1: South Carolina Fleet Maintenance Contracts

Entity	Units <sup>a</sup>	Expended Before Contract <sup>b</sup>	Contract Start-Up	Contract Amount	Savings
Florence County	218	\$600,000	07/88	\$524,877	\$75,123
City of Gaffney	104	240,000 <sup>c</sup>	02/91	236,820	3,180
Orangeburg County	240	643,000	07/91	491,513	154,667
Horry County	465	1,200,279	01/92	999,604	200,676
Richland County	663	\$1,448,223	07/92	\$1,009,203	\$439,020
<b>Total</b>	<b>1,690</b>	<b>\$4,131,502</b>		<b>\$3,262,017</b>	<b>\$872,666</b>

- a The number of units contracted may differ from those actually maintained under the contract.
- b This period is the year before contracting. The amounts expended by Florence and Gaffney were estimated by the appropriate officials.
- c The contractor hired two additional mechanics.

Sources: City and county officials and fleet maintenance contracts.

Contracting for maintenance has yielded savings, streamlined procurement, and reduced administrative paperwork.

According to officials in the above locations, the contracts have or are expected to yield savings. Further, contracting has administratively improved maintenance operations by streamlining the procurement process and reducing the volume of procurement documents.

Florence county has used contracted fleet maintenance for approximately five years, the longest period in South Carolina. A Florence county official told us that this has resulted in better training programs for mechanics and service at a reduced cost. This official estimated that the county expended \$600,000 per year for maintenance services before contracting. The contract in the first year amounted to \$480,000, 20% less than the previous year's expenditures.

We reviewed the experiences of the cities of Fort Lauderdale, Florida, and Des Moines, Iowa. Fort Lauderdale with a current fleet of 900, has contracted for fleet maintenance since November 1982. In the first four years of the contract, the city had cumulative savings of \$1.8 million, an

average of \$450,000 a year. The auto services manager of Fort Lauderdale stated that the contract has been an asset to the city.

In addition, the city of Des Moines, Iowa, with 1,600 units, has contracted for fleet maintenance since May 1983. In May 1986, Des Moines renewed its contract for 10 years. According to Des Moines' finance director, contracting has saved an average of \$350,000 a year (\$2 million over the contract period). Further, the finance director stated that the contract has resulted in less vehicle downtime and repeat repairs.

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### Test Sites for Fleet Maintenance Contracting: SDE and SCDHPT

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In 1992, the Georgia Privatization Task Force recommended test projects to demonstrate the value of privatization. Further, a consultant report which reviewed costs, including maintenance costs, of providing student bus transportation in South Carolina for FY 87-88 recommended test projects to determine if savings could be realized from privatization. Additionally, the South Carolina Reorganization Commission in a 1991 report noted that public officials recommend test projects in studying the feasibility of privatization.

Of the 148 state maintenance facilities, 95 (63%) are operated by SDE and SCDHPT. Since these facilities repair similar units, sites from SDE and SCDHPT would serve as good test sites for maintenance contracting. At a minimum, each site should contract for fleet maintenance for a two-year period to allow cost comparison with similar "in-house" operations.

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## Recommendations

- 1 The Budget and Control Board, through the Division of Motor Vehicle Management should work with the State Department of Education and the South Carolina Department of Highways and Public Transportation to determine sites which are suitable to test fleet maintenance contracting.
- 2 The Division of Motor Vehicle Management in consultation with the State Department of Education and the South Carolina Department of Highways and Public Transportation should initiate requests for proposals (RFPs) for the chosen test sites to determine the most cost-effective means to provide maintenance services. Conversion from in-

house to private sector maintenance should be considered when savings of at least 10% of the personnel costs can be realized.

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## Centralized Purchasing of Maintenance Parts and Supplies

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We noted situations where agencies purchased certain parts for two to four times the price paid by other agencies during the same time period.

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The Budget and Control Board has not ensured that centralized purchasing of supplies and parts, mandated under §1-11-290 of the South Carolina Code of Laws, has been fully achieved. As a result, the state may be spending significantly more than is necessary for many commonly used vehicle parts and supplies. We noted situations where agencies purchased certain parts for two to four times the price paid by other agencies during the same period.

Section 1-11-290 of the South Carolina Code of Laws requires the Budget and Control Board to develop a plan for "maximally cost effective vehicle maintenance." A specific requirement of this plan is central purchasing of supplies and parts. The board's Division of Motor Vehicle Management (DMVM) has developed a program intended to satisfy this requirement. DMVM's *South Carolina Maintenance Facility Certification Program* manual states:

Central purchasing is defined as purchases made in accordance with the State Procurement Code and accomplished through compliance with all applicable policies and procedures established by the Materials Management Office (MMO).

Agencies are required to purchase parts and supplies through contracts established by MMO when they are most cost-effective. However, this policy alone does not ensure the requirement for central purchasing is met.

According to an MMO official, there are only a few contracts for motor vehicle parts and supplies. These contracts are between vendors and the South Carolina Department of Highways and Public Transportation (SCDHPT) for certain filters, tires, and batteries. The State Department of Education (SDE) also has contracts for most of its school bus parts needs. MMO has statewide contracts for fuels and lubricants through which all agencies can purchase these substances; however, MMO has no vehicle parts contracts for general use by other state agencies.

Statewide vehicle general use parts contracts could be structured like those used by SDE. Their contracts generally reference a specific manufacturer's catalog. Prices are based on a discount from the catalog prices. SDE does not operate a central supply depot. Their contracts include free shipping to the county shops on orders costing over \$200. North Carolina and Tennessee use similar arrangements for their parts and supply needs.

The DMVM program also allows agencies to purchase parts and supplies from the SCDHPT central supply depot in Columbia. They may also have their purchases delivered to the nearest SCDHPT county facility. However, the SCDHPT supply catalog contains only general use vehicle parts such as batteries, filters, spark plugs, and tires. Parts which are more specialized are not available from the catalog. Furthermore, the SCDHPT recently stopped selling automotive batteries to other agencies.

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### Purchasing From the SCDHPT Supply Depot

We obtained information from SCDHPT to determine the extent to which agencies are purchasing through the supply depot. SCDHPT records indicate that 8 (31%) of the 26 other agencies which operate maintenance facilities made no purchases from the supply depot during FY 90-91. Overall, only 11% to 13.5% of the parts and supplies purchased during FY 90-91 were purchased from the supply depot. We compared the cost of items purchased from the supply depot to the cost of all parts and supplies purchased by all agencies. To estimate the effect of decentralized purchasing, we sampled certain commonly used parts. We found that some agencies routinely purchased items, available through the supply depot, from private vendors at two to four times the supply depot price. For example, the Department of Wildlife and Marine Resources purchased 118 oil filters for Ford sedans at \$4.76 each from private suppliers. Some of the other agencies purchased these filters from the supply depot for \$1.71 each.

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Overall, only 11% to 13.5% of the parts and supplies purchased during FY 90-91 were purchased from SCDHPT central supply depot.

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For the items sampled, the supply depot price was generally lower than the price paid by agencies which purchased on the local market. SCDHPT purchased hundreds and in some cases thousands of the items in our sample, whereas the other agencies purchased relatively few of each item. This indicates that purchasing maintenance parts and supplies in large quantities can result in significant savings. Centralized purchasing would allow other agencies to realize the savings potential of volume buying.

However, purchasing through the SCDHPT depot has some inconveniences. For instance, the depot will not accept parts returned by agencies when they become obsolete. Some agencies have been "stuck" with parts they can no longer use when vehicles are replaced. Further, some of the supply depot policies may actually discourage agencies from ordering. The depot will not quote current prices for parts. Agencies may be charged more or less than the depot's catalog price. Agencies must order in whole units, such as cases, even though they do not need the whole unit. Also, if a part purchased from the depot fails, the depot will not exchange the part. The depot is supposed to help get the item replaced from the supplier.

As mentioned earlier, the current catalog of vehicle and equipment parts is limited to general use items. This means that vehicle-specific items must be purchased elsewhere. For the supply depot to become the central purchasing organization for all of the state's parts and supply needs, the catalog selection must be expanded. Expanding the catalog selection could increase costs initially to the SCDHPT. It might also require additional staffing to handle the increased volume of orders. Catalog prices should reflect the costs to SCDHPT of providing this service. According to a department official, SCDHPT charges an 8% "markup" on its cost of parts and supplies sold to other agencies. We did not evaluate the adequacy of these charges.

Centralized purchasing of parts and supplies is required under §1-11-290 of the South Carolina Code of Laws. It also offers significant savings potential. Either of the methods described above, or a combination of the two, could achieve centralized purchasing.

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## Recommendations

- 3 The Budget and Control Board's Material Management Office should establish contracts for commonly needed vehicle repair parts and supplies. These contracts should be available to all state agencies.
- 4 If the South Carolina Department of Highways and Public Transportation supply depot is to be used as the central state purchasing and warehousing agent for vehicle and equipment parts, the department should expand its catalog to include items commonly needed by all of the state's vehicle and equipment types.

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## Mechanic Staffing and Salary Costs

According to information provided by the Budget and Control Board's Division of Human Resource Management (DHRM), there were approximately 641 state-funded and other-funded (non-federal) automotive maintenance technicians as of December 31, 1991. In addition, personnel in classifications such as trades worker and trades helper function in mechanic roles. We estimate the actual number of full-time equivalent (FTE) mechanics to be approximately 710. Our estimate is based on analysis of the official position descriptions for personnel assigned to maintenance operations. Our analysis considers the percent of time that each person is to be acting in a mechanic capacity (see Table 2.3). According to DHRM information, the average annual salary for state-funded and other-funded mechanic personnel as of December 31, 1991 was approximately \$19,000. With employer contributions added, the average total cost per mechanic was about \$24,700 per year.

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## Optimum Mechanic Staffing

Estimating the optimum mechanic staff depends on several factors. According to *Runzheimer Reports on Fleet Maintenance and Safety* magazine (recognized management consultants for travel costs), the significant factors to consider in determining the ideal mechanic staffing level include:

- Fleet classification.
- Vehicle types.
- Presence or absence of specialized equipment.
- Vehicle and equipment duty and life cycles.
- Types of repairs performed in-house.
- Maintenance philosophy.
- Centralization of garages.
- Maintenance organization.

Of the factors listed by Runzheimer, maintenance philosophy may have the greatest impact on the number of mechanics needed. The frequency and extent of scheduled maintenance has the largest effect on the total number of maintenance labor hours required. The United States Air Force (USAF) estimates that approximately 65% of the average annual maintenance labor hours for vehicles and equipment is incurred in preventive maintenance. Vehicle and equipment maintenance philosophy

is a policy matter which can have a material effect on the cost of providing services.

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The frequency and extent of scheduled maintenance has the largest effect on the total number of maintenance labor hours required.

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We estimated the required mechanic staff for complete state-provided services based on the specific attributes of South Carolina's fleets. Estimates of needed annual mechanic labor hours were developed through surveys and meetings with agency maintenance personnel. In some cases, actual maintenance documents were examined, and average annual labor times calculated.

Our primary analysis of required mechanic staffing was made using estimates of mechanic labor which were developed by the USAF. The USAF system is discussed in more detail in Appendix A. We analyzed the mechanic staffing using both the agency estimates and the USAF estimates. Table 2.4 presents the results of the USAF based analysis because it is more conservative than the analysis using agency estimates. The results of our analysis using agency estimates is presented for the State Department of Education (SDE) and the South Carolina Department of Highways and Public Transportation (SCDHPT) fleets.

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## Conclusion

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If the state were to anticipate providing complete maintenance and repair services for all of its vehicles and equipment, present staffing may not be adequate. Our analyses indicate that the fleet may require as many as 827 FTE mechanics statewide for a complete service program compared to the 710 FTE currently employed. However, this does not mean that more mechanics are needed, or that the state should even be staffed to provide the current level of maintenance. Many agencies, including some which operate maintenance facilities, use private companies for much of their vehicle maintenance. Our survey of state motor vehicle operators (see Appendix B) indicated that 1,850 of 8,422 (22%) who responded receive most of their vehicle maintenance from private providers. We did not adjust our staffing analysis for these respondents because the surveys did not quantify the level of maintenance performed by private vendors. Other options such as privatization of maintenance facilities and contracted private vendors may offer savings (see p. 4, p. 20).

Chapter 2  
State Vehicle and Equipment Maintenance Facilities

Table 2.2: Summary of State-Owned Maintenance Facilities and Operating Costs FY 90-91

Agency	Number of Facilities	Costs			Total
		Personnel	Parts and Supplies	Other	
Aeronautics Commission, SC	1	\$62,824	\$15,942	\$4,906	\$83,672
Budget and Control Board, State Divisions of General Services and Motor Vehicle Management	2	165,896	116,802	7,193	\$289,891
Citadel, The	1	86,500	8,166	1,200	\$95,866
Clemson University	9	386,538	342,143	57,732	\$786,413
College of Charleston	1	47,423	7,427	3,447	\$58,297
Corrections, Department of	1	117,978	106,631	5,682	\$230,291
Criminal Justice Academy, SC <sup>a</sup>	1	30,836	17,371	4,925	53,132
Deaf and the Blind, SC School for the	1	157,236	41,590	11,131	209,957
Denmark Technical College	1	21,643	3,408	0	25,051
Education, State Department of	45	12,103,242	4,661,821	811,261	17,576,324
ETV, SC	1	64,732	28,150	3,134	96,016
Forestry Commission, SC State	14	682,403	288,347	143,463	1,114,213
Francis Marion University	1	26,972	8,267	16,895	52,134
Greenville Technical College	1	30,342	113	2,800	33,255
Health and Environmental Control, Department of	1	111,395	46,581	49,847	207,823
Highways and Public Transportation, SC Dept. of	50	8,738,731	9,249,631	1,994,549	19,982,911
John De La Howe School	1	11,895	3,863	0	15,758
Lander University	1	2,882	1,366	0	4,248
Law Enforcement Division, SC	1	58,992	46,390	1,717	107,099
Medical University of South Carolina, The <sup>b</sup>	1	24,806	49,752	7,999	82,557
Mental Retardation, Department of	4	214,083	69,042	22,646	305,771
Mental Health, Department of	3	319,116	129,395	125,283	573,794
Midlands Technical College	1	9,243	3,000	2,405	14,648
Piedmont Technical College	1	7,260	15,000	1,226	23,486
University of South Carolina	2	178,842	93,441	6,666	278,949
Wildlife and Marine Resources Department, SC	1	24,312	18,900	0	43,212
Youth Services, SC Department of	1	36,348	19,724	1,971	58,043
<b>Total</b>	<b>148</b>	<b>\$23,722,470</b>	<b>\$15,392,263</b>	<b>\$3,288,078</b>	<b>\$42,402,811</b>

All costs were reported by the agencies. We did not verify these amounts.

Personnel costs include employer contributions.

Parts and supplies costs include fluids and oil, but not fuel.

To the extent possible, capital items, such as large or expensive equipment, purchased during FY 90-91 were excluded as these might tend to distort the annual costs.

a The Criminal Justice Academy facility is for repair of training vehicles only.

b The MUSC facility closed as of July 1, 1992.

**Table 2.3: Summary of Maintenance-Related Personnel and Mechanic Equivalents**

Agency	Positions Reviewed	Approximate Mechanic Equivalents
Aeronautics Commission, SC	8	2.6
Budget and Control Board, State	10	5.2
Citadel, The	5	1.9
Clemson University	35	11.2
College of Charleston	2	1.0
Corrections, Department of	6	1.7
Criminal Justice Academy, SC	2	.4
Deaf and the Blind, SC School for the	5	3.7
Denmark Technical College	1	.9
Education, State Department of	444	296.3
ETV, SC	2	1.0
Forestry Commission, SC State	31	18.4
Francis Marion University	1	.7
Greenville Technical College	1	1.0
Health and Environmental Control, Department of	4	3.0
Highways and Public Transportation, SC Dept. of	460	339.1
John De La Howe School	1	.4
Lander University	1	.2
Law Enforcement Division, SC	2	1.0
Medical University of South Carolina, The	4	.9
Mental Retardation, State Department of	7	3.6
Mental Health, State Department of	10	6
Midlands Technical College	1	1.0
Piedmont Technical College	1	.5
University of South Carolina	9	7.0
Wildlife and Marine Resources Department, SC	1	.8
Youth Services, SC Department of	3	.9
<b>Total</b>	<b>1,057</b>	<b>710.4</b>

Many employees function in multiple jobs. We analyzed the official position descriptions for 1,057 employees assigned vehicle and equipment maintenance duties. The mechanic equivalent represents only the portion of duties that are repair and maintenance of vehicles and equipment.

Chapter 2  
State Vehicle and Equipment Maintenance Facilities

Table 2.4: Comparison of Required Mechanic Staff To Actual Mechanic Staffing—USAF Vehicle Equivalent Method

Agencies With Maintenance Facilities	Number of Vehicles and Equipment	Estimated				(Under) Over FTE
		Automobile Equivalents	Required Mechanic Hours	Required Mechanic FTE	Actual Mechanic FTE	
Aeronautics Commission, SC	28	45.1	1,035.05	0.6	2.6	2.0
Budget and Control Board, State Divisions of General Services and Motor Vehicle Management	1,161	1,321.8	30,335.31	17.8	5.2	(12.6)
Citadel, The	47	64	1,468.80	0.9	1.9	1.0
Clemson University	741	964.5	22,135.28	13.0	11.2	(1.8)
College of Charleston	31	40.7	934.07	0.6	1.0	0.4
Corrections, Department of	899	1,365.8	31,345.11	18.4	1.7	(16.7)
Criminal Justice Academy, SC	34	78.9	1,810.76	1.1	0.4	(0.7)
Deaf and the Blind, SC School for the	76	122.1	2,802.20	1.7	3.7	2.0
Denmark Technical College	17	26.3	603.59	0.4	0.9	0.5
Education, State Department of	6,705	16,256.5	599,564	352.7	296.3	(56.4)
ETV, SC	69	90.4	2,074.68	1.2	1.0	(0.2)
Forestry Commission, SC State	763	1,690.8	43,115.4	25.4	18.4	(7.0)
Francis Marion University	40	49.2	1,129.14	0.7	0.7	0.0
Greenville Technical College	87	122.9	2,820.55	1.7	1.0	(0.7)
Health and Environmental Control, Dept. of	414	486.6	11,167.47	6.6	3.0	(3.6)
Highways and Public Transportation, Dept. of	12,420	22,896.1	525,466	309.1	339.1	30.0
John De La Howe School	19	26.6	610.47	0.4	0.4	0.0
Lander University	23	28	642.60	0.4	0.2	(0.2)
Law Enforcement Division, SC	340	511.4	11,736.63	6.9	1.0	(5.9)
Medical University of South Carolina, The	84	129.3	2,967.44	1.8	0.9	(0.9)
Mental Retardation, State Department of	273	369	8,468.55	5.0	3.6	(1.4)
Mental Health, State Department of	543	703.7	16,149.92	9.5	6.0	(3.5)
Midlands Technical College	47	55.6	1,276.02	0.8	1.0	0.2
Piedmont Technical College	24	29.9	895.51	0.5	0.5	0.0
University of South Carolina	408	553.7	12,707.42	7.5	7.0	(0.5)
Wildlife and Marine Resources Dept., SC	744	1,281.3	29,405.84	17.3	0.8	(16.5)
Youth Services, SC Department of	112	147.4	3,382.83	2.0	0.9	(1.1)
<b>Subtotal</b>	<b>26,149</b>	<b>49,457.6</b>	<b>1,366,050.64</b>	<b>804.0</b>	<b>710.4</b>	<b>(93.6)</b>
Other Agencies With State Vehicles and Equipment	1,170	1,715.1	39,361.63	23.1	0.0	(23.2)
<b>Grand Total</b>	<b>27,319</b>	<b>51,172.7</b>	<b>1,405,412.27</b>	<b>827.1</b>	<b>710.4</b>	<b>(116.8)</b>

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## **Logistics of SDE Maintenance Result in Unconstructive Mechanic Time**

Approximately 20% of mechanic time at the State Department of Education (SDE) is not constructive and another 10% may be an inefficient use of mechanic labor. The salary and employer contributions costs related to this time are about \$2 million per year. According to an SDE official, the department has started reviewing the work activities of mechanics in the larger shops. Further study of this issue is warranted.

SDE policy is to perform routine maintenance of buses at their daytime parking locations. Normally, the parking location is a public school parking lot. School buses are generally parked at the driver's home overnight, so maintenance must be performed during the day when the buses are relatively centralized. Mechanics travel between the county repair shops and the various parking lots. They also make emergency calls to buses stranded en route. It is also department policy for mechanics to fuel the parked buses from tanker trucks. According to the SDE transportation office, approximately 126,000 hours per year are spent by mechanics traveling between bus parking areas, and another 59,000 hours are spent fueling buses. Based on 2,080 hours per mechanic per year, these activities take up approximately 30% of the total work time.

Although these policies are intended to minimize the cost of empty bus miles, their associated personnel costs are approximately \$2 million per year. Annual operating and maintenance costs of fuel, lubrication, and service trucks are estimated to cost an additional \$500,000. To eliminate most of the mechanic travel costs, the buses could be brought to the county shops each night for servicing and maintenance. Bus drivers could fuel their buses from fixed pumps, or tankers could be used within the shop parking lots. Either way refueling costs could be reduced. This alternative might also reduce the number of emergency service calls because problems such as flat tires and dead batteries would likely be detected and fixed during nightly servicing. The number and cost of empty bus miles would not necessarily increase since bringing empty buses back to the shops each night might not be more than the miles already used by the drivers returning to their homes from the last route stop.

Approximately 20% of mechanic time at SDE is unproductive, and another 10% may be inefficient use of mechanic labor.

We requested information from the department which would allow us to estimate the cost of this alternative. However, SDE was unable to comply with our request due to a lack of staff and resources. Any analysis of the current policy must consider the costs of the alternative policy. Some factors to consider include additional bus driver costs, costs of expanding the parking and service capacities of the shops, and the effects of increased traffic around the shops.

We analyzed the SDE mechanic staffing using estimates developed by the transportation office and the USAF system (see Appendix A). If travel and fueling time are included, the department appears to be understaffed by 51 to 57 FTE mechanics. However, if this time is eliminated, they appear to be *overstaffed* by 52 to 58 FTE mechanics.

Table 2.5 compares the results of these analyses without travel and fueling time.

Table 2.5: Analysis of Mechanic Staffing at SDE

Method	SDE	USAF
Number of Buses	6,020	6,020
Other Vehicles	685	685
Required Mechanic Hours	404,332 <sup>a</sup>	414,541
Annual Hours Per Mechanic	1,700	1,700
FTE Mechanics Required	238	244
Current Mechanic Staff	296	296
Overstaffing	58	52

<sup>a</sup> SDE provided time estimates for its buses only. We used USAF estimates for the 685 other vehicles. Those vehicles account for 30,766 hours or approximately 8% of total hours.

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Travel and fueling requires the equivalent of 109 full-time mechanics.

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Travel and fueling requires the equivalent of 109 full-time mechanics. According to an SDE official, the department has asked all school districts to limit the number of bus parking sites to three, and that buses be made available for three uninterrupted hours on days when maintenance is scheduled. The transportation office intends to require half of the mechanics to work 100% of the time in the shops so that travel time is reduced.

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## Recommendations

- 5 The State Department of Education should evaluate its policies concerning bus parking and mechanic activities to determine if less costly alternatives are available.
  - 6 The State Department of Education should evaluate its mechanic staffing levels after travel time is reduced to determine if staffing can be reduced.
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## SCDHPT Mechanic Staff

The South Carolina Department of Highways and Public Transportation (SCDHPT) may be overstaffed by as many as 52 full-time equivalent mechanics. A reduction of 52 mechanics could save the department approximately \$1.2 million per year in salary, employer taxes, and fringe benefits costs. However, before such a reduction is implemented, the department should complete a shop-by-shop analysis of staffing and work load.

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Both the United States Air Force vehicle equivalent system and SCDHPT estimates show an overstaffed situation.

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As of June 30, 1991, the department employed approximately 339 full-time equivalent (FTE) mechanics. FTE is an approximation because some employees function in multiple roles. We analyzed the position descriptions of personnel assigned to the county shops and repair depot. We calculated the mechanic FTE by eliminating job functions that were either supervisory, clerical or not maintenance related. The resulting FTE should reflect the department's mechanic capacity.

We analyzed the department's vehicle and equipment fleets to determine the required number of mechanic FTEs. We used two different methods to calculate the needed FTEs. In our first analysis, we used estimates of the scheduled maintenance labor time provided by the department's district

office personnel for each vehicle and equipment type. We added a factor (based on the USAF system described in Appendix A) for unscheduled repairs. Our second analysis used estimates of labor time developed by the United States Air Force for its fleets. These estimates include both scheduled and unscheduled maintenance. Finally, we estimated the net annual time that mechanics are available to work by deducting estimates for holidays, leave, breaks, and travel time from the normal SCDHPT work schedules. Table 2.6 compares the results of our two analyses. As can be seen, the USAF method results in a greater need for mechanics than the estimates developed by the department. However, both analyses show an overstaffing of mechanics.

Based on information provided by the Budget and Control Board's Division of Human Resource Management, we estimated that the average salary, employer taxes, and fringe benefits costs for mechanics at SCDHPT was approximately \$22,915 per mechanic as of December 31, 1991. Reductions based on the above analyses could save between \$687,000 and \$1.2 million per year.

Table 2.6: Analyses of SCDHPT  
Mechanic Staffing

Method	SCDHPT	USAF
Equipment Items	12,420	12,420
Mechanic Hours Required	487,897	525,466 <sup>a</sup>
Mechanic Availability	+ 1,700	+ 1,700
Required Mechanics	287	309
Current Staffing	339	339
Overstaffing Indicated	52	30

<sup>a</sup> We could not identify an appropriate USAF estimate for 976 items of SCDHPT equipment. We used SCDHPT estimates for these items. These items account for 21,206 hours or 4% of total hours shown.

We did not analyze the staffing of individual county shops. The vehicle and equipment information provided by the department was not summarized by facility. It may be that some shops are understaffed for the equipment they are responsible for maintaining. Also, our analysis does not address the age or use patterns of the equipment. These factors

could impact the staffing requirements. Before any personnel reductions are implemented, a shop-by-shop staffing study should be completed.

The department has no formal method of determining the optimum mechanic staff for its shops. The department is currently implementing a comprehensive automated equipment management system which will provide information on the number of maintenance labor hours required for each unit of equipment. This system could be used to develop mechanic staffing standards.

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## Recommendations

- 7 The South Carolina Department of Highways and Public Transportation should develop formal mechanic staffing policies which reflect the requirements of the vehicle and equipment fleets being maintained.
- 8 The South Carolina Department of Highways and Public Transportation should use these policies to evaluate the mechanic staffing at each of its maintenance shops and make staff reductions where needed.

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## Commercial Vendor Repair Program

In our 1991 audit, we noted that DMVM's commercial vendor repair program (CVRP) was "an innovative means to lower state vehicle maintenance costs." The CVRP involves contracts with vendors throughout the state for repair and service of state-owned vehicles. State agencies electing to participate in the program enter into an interagency agreement with DMVM. As needed, a driver from a participating agency calls a "toll-free" telephone number at DMVM for instruction on where to take a vehicle for repair.

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Only 11 agencies participate  
in the CVR program.

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During our 1991 review, we recommended expansion of the program beyond DMVM and the one other participating test agency, to other state agencies. We reported that the test agency had saved an estimated \$20,000 during the first five months of the program and was projecting a 41% savings for the year. The program has been expanded to nine other agencies (see Table 2.7), however, more oversight by DMVM is needed to adequately ensure that vehicle repairs are necessary.

Table 2.7: Commercial Vendor Repair Program Participation

Agency	Start-Up	Fleet Size <sup>a</sup>	Commercial Repairs <sup>b</sup>	DMVM Repairs <sup>b</sup>
Alcohol Beverage Control Commission, SC	2/90	79	\$33,392	\$17,748
Blind, SC Commission for the	3/91	3	\$193	\$2,232
Budget and Control Board, State Research and Statistical Services, Division of	3/91	14	\$775	\$4,389
Clemson University	4/91	742	\$1,384	\$194
Coastal Council, SC	8/91	7	\$4,367	0
Continuum of Care for Emotionally Disturbed Children	1/91	8	\$3,021	0
Health and Environmental Control, Department of	5/91	416	\$54,556	\$2,440
Law Enforcement Division, SC	8/91	345	\$44,302	\$15,451
Sea Grant Consortium, SC	1/91	1	\$158	0
Wildlife and Marine Resources Department, SC	2/92	729	\$11,309	\$10,745
<b>Total</b>		<b>2,334</b>	<b>\$153,457</b>	<b>\$52,999</b>

This table includes agencies other than DMVM that participate in the CVRP.

- a Fleet size varies throughout the year. This is the size of the agency fleet as of 11/91. According to officials of Clemson University, DHEC and SLED, a small portion of their vehicle repairs are performed under the CVRP. The majority of vehicle repairs in these agencies are performed in-house. In-house repairs are not included in the total.
- b Expenditures for commercial repairs include parts, labor and warranty deductibles. DMVM repairs are those performed in the DMVM facility which are billed under the CVRP. Expenditures for DMVM repairs include parts and labor.

## CVRP Utilization

Although one of the main purposes of the CVRP was to reduce maintenance costs, participating agencies use the program to varying degrees. Some agencies use commercial vendors who do not participate in the CVRP program. The service costs for these agencies may be higher than necessary. As a result, the ability to assess the cost effectiveness of CVRP as compared to state repairs is hindered.

We attempted to compare the costs of CVRP repairs and those performed in state maintenance facilities. However, we could not compare agency in-house expenditures to those in the CVRP due to varying labor costs and record-keeping procedures. As a result, we were unable to review a

random sample of any particular service performed in a state facility which was also bid under the CVRP (i.e., oil change).

As of June 1992, at least three of the agencies with large fleets that participate in the CVRP used the program for a small percentage of their fleets. These agencies included the State Law Enforcement Division (SLED), which as of November 1991, had an approximate vehicle inventory of 345; the Department of Health and Environmental Control (DHEC), with an approximate inventory of 416 vehicles; and Clemson, with an approximate inventory of 742 vehicles. According to officials of these agencies, a range of 60% to 99% of their vehicle repairs are performed in respective agency facilities. Only those repairs outside of the immediate vicinity of the facilities are serviced under the CVRP. Only 11 state agencies participate in the CVRP.

As of August 1992, a total of 286 vendors (general repair shops, dealerships and specialty shops) throughout the state participated in the CVRP. There was a larger concentration of vendors in the larger metropolitan areas to include Charleston, Greenville, and Richland counties.

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## CVRP Oversight

DMVM staff do not perform field inspection of repairs made under the CVRP to ensure they are necessary and adequately performed. A total of two DMVM employees work full-time with the program, with three additional employees acting as "back-ups" when necessary. The full-time employees or their replacements are respectively authorized to approve repairs of approximately \$2,500 and \$1,500.

DMVM staff, upon receiving calls from drivers at participating agencies, review a computerized history of the applicable vehicles to authorize repairs. Authorization is based primarily on reasonableness relative to consideration of previous repairs on the vehicle. When the bill for a vehicle repair is submitted to DMVM, agency staff review the invoice for accuracy of the cost negotiated.

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In addition to in-house monitoring, field inspection is necessary to control maintenance costs.

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Of seven southeastern states, only Georgia has a program comparable to the CVRP. According to an official of the Georgia Division of Motor Vehicle Services, in addition to computer monitoring, on-site visits are occasionally made to verify the need for vehicle repairs.

The South Carolina Fleet Management Center of the United States General Services Administration (USGSA) located in Columbia uses commercial vendors throughout the state for vehicle repairs. According to the USGSA fleet manager in South Carolina, the agency has approximately 1,350 vehicles within the state, the majority of which are serviced by commercial vendors. In addition, a USGSA inspector within South Carolina makes announced and unannounced on-site visits to commercial vendors to verify the need for repairs. The official stated that the agency has had problems with vendors concerning unnecessary repairs in the past. The Atlanta Regional Office of USGSA monitors vehicle repairs by computer.

The book, *Public Automotive Fleet Administration*, written by a consultant with 20 years of experience in state government vehicle management, states that maintenance performed in outside shops should be monitored through use of a computer system *and* field inspection. According to this publication, without this element of control, maintenance costs can increase unreasonably.

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## Conclusion

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Without adequate utilization of the CVRP, participating agencies are unable to determine the potential savings of the program. The ability to analyze the costs of the CVRP in comparison with previous costs is limited. More control through field inspection is needed to control maintenance costs.

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## Recommendations

- 9 The Division of Motor Vehicle Management should periodically conduct field inspection of vendors participating in the commercial vendor repair program.
- 10 The Division of Motor Vehicle Management should specify a minimum level of participation in program interagency agreements in

order to examine the cost-effectiveness of the commercial vendor repair program.

## Retreaded Tires

South Carolina might have saved nearly \$97,000 in FY 90-91 by purchasing retreaded tires instead of new tires for its large trucks and heavy equipment. South Carolina purchased over 49,000 tires in FY 90-91 at a cost of about \$3.6 million. While the State Department of Education saved approximately \$1.7 million that year by purchasing retreaded bus tires instead of new tires, other state agencies generally have not bought retreaded tires. The savings potential from increased retreaded use appears to be limited to the larger tire sizes used on trucks and special vehicles as opposed to passenger cars. Aside from the financial savings, the use of retreads may reduce the environmental costs of tire disposal.

The State Department of Education purchased approximately 20,000 bus tires at a cost of about \$1.5 million. Of these, about 16,000 were retreaded tires. Had all 20,000 tires been purchased new, they might have cost approximately \$3.1 million. By purchasing retreaded tires instead of new, the department saved approximately \$1.7 million. Table 2.8 summarizes the department's tire purchases.

Table 2.8: State Department of Education Tire Purchases FY 90-91

Tire Size	Quantity	Cost If New	Actual Cost	Savings
265/75R22.5	3,649	\$623,249	\$329,677	\$293,572
825 R20	3,849	476,429	182,697	293,732
900 x 20	12,627	2,029,033	953,577	1,075,456
Others	302	17,212	17,212	•
<b>Total</b>	<b>20,427</b>	<b>\$3,145,923</b>	<b>\$1,483,163</b>	<b>\$1,662,760</b>

Of the almost 29,000 tires purchased by the other 14 agencies we surveyed, only 27 tires were retreads.

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By purchasing retreaded bus tires instead of new, SDE saved approximately \$1.7 million in FY 90-91. Of the about 29,000 new tires purchased by the other 14 agencies surveyed, only 27 tires were retreads.

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The use of retreaded tires reduces the number of waste tires, and saves petroleum.

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New equipment and processing technology, along with regular inspection of facilities to ensure compliance with vigorous federal safety standards, now establishes the safety of retreaded tires for use on trucks and heavy equipment.

According to a national retreader's association spokesman, SCDHPT officials, and information from other states, retreads are commonly used on larger vehicles and equipment, but they may not be suitable for use on police vehicles. Information provided by the director of Tire Retread Information Bureau, a nonprofit industry association, indicates that there is no economic advantage in using retreads on police vehicles. The United States General Services Administration's (USGSA) tire purchase program, discussed below, includes retreads for larger vehicles but not for passenger cars. According to the program manager, passenger retreads are currently being tested with the intent of including them on its qualified products list in the near future. California is also testing retreaded passenger tires on state-owned vehicles. However, officials with SCDHPT and DMVM in South Carolina generally held unfavorable opinions concerning the use of retreads on passenger and police cars.

The United States Environmental Protection Agency encourages the use of retreaded tires on fleet trucks and heavy equipment through its tire purchase program. Every year the USGSA publishes a supply list of new and retreaded tires which meet federal tire standards. A federal certification program continually monitors the quality of retreading at certified shops. A USGSA official stated that the facility certification program, tire specification, and the qualified products list are available for states to use in setting up their own retread purchasing programs.

We compared the prices paid by eight state agencies for certain larger size new tires to the same size retreaded tire price shown in the USGSA 1992 federal supply schedule. We identified an additional \$97,000 that could be saved by purchasing retreaded tires instead of new for those sizes identified in the federal supply schedule, assuming that FY 90-91 tire purchases are typical of future purchases (see Table 2.9).

Although the additional savings potential from expanded retread use is not great, there are environmental considerations. According to the 1991 Department of Health and Environmental Control report "Waste Tire Management in South Carolina," waste tires go to either landfills or stockpiles. Both of these practices can have undesirable public health consequences. The report further states that the use of retreaded tires reduces the number of waste tires and saves petroleum. According to the

SCDHPT, the cost of disposing of discarded tires ranges from 85¢ per tire to \$11 per tire depending on the tire size. SCDHPT has contracted to pay a private firm approximately \$48,000 in FY 92-93 to remove and destroy 28,600 old tires.

In June 1992, the SCDHPT contracted with a private firm to retread an estimated 1,800 tires over an initial contract period of two years, with an option to extend for three additional years. According to a SCDHPT official, this represents about 8% of the department's FY 90-91 non-passenger and non-police car tire purchases.

Table 2.9: Savings Potential From Purchasing Retreaded Tires Instead of New For Identifiable Tire Types and Sizes

Agency	FY 90-91		# of Potential Retreaded Tires Identified	Cost of New Tires Purchased	Cost If Retreaded Tires Purchased	Potential Savings	Savings As A Percentage Of	
	Total Tire Purchases	Total Tire Cost					Identified Tire Cost	Total Tire Cost
Budget and Control Board, State Motor Vehicle Management, Div. of	1,638	\$66,984	87	\$9,046	\$6,177	\$2,869	31.72%	4.28%
Clemson University	686	\$42,316	155	\$15,953	\$12,462	\$3,491	21.88%	8.25%
Forestry Commission, SC State	416	\$39,203	26	\$4,803	\$4,231	\$573	11.92%	1.46%
Highways and Public Transportation, Dept. of	23,090	\$1,817,448	3,948	\$604,946	\$516,526	\$88,419	14.62%	4.87%
Mental Health, State Department of	618	\$32,761	17	\$1,314	\$1,215	\$98	7.49%	0.30%
University of South Carolina	480	\$25,722	23	\$2,585	\$2,061	\$524	20.27%	2.04%
Vocational Rehabilitation Department, SC	104	\$9,854	4	\$593	\$428	\$165	27.79%	1.67%
Youth Services, SC Department of	96	\$5,513	29	\$2,433	\$2,068	\$366	15.02%	6.63%
<b>Total</b>	<b>27,128</b>	<b>\$2,039,801</b>	<b>4,289</b>	<b>\$641,674</b>	<b>\$545,169</b>	<b>\$96,505</b>	<b>15.04%</b>	<b>4.73%</b>

Source: We requested information on FY 90-91 tire purchases from the 14 agencies which own more than 100 vehicles. Only the agencies shown in this table provided information in sufficient detail to compare to the USGSA federal supply schedule.

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## Recommendations

- 11 The General Assembly should consider adapting the federal tire purchase program for use in equipping the state fleet. Where cost-effective, retreaded tires should be purchased in preference over new tires.
- 12 The Division of Motor Vehicle Management should conduct an evaluation of retread applications on passenger cars to determine the extent of economic and environmental benefits. If the evaluations so indicate, the General Assembly may wish to include passenger retreads in any tire purchase program it adopts.

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## Consolidation of Maintenance Facilities

In previous reviews of the Motor Vehicle Act, we examined the Budget and Control Board's compliance with its statutory mandate to ensure that maintenance services are not duplicated. Section 1-11-300 of the South Carolina Code of Laws states:

The Board shall promulgate regulations regarding the purchase of motor vehicle equipment and supplies to ensure that agencies within a reasonable distance are not duplicating maintenance services . . . .

Other studies concerning consolidation have been undertaken. In 1972, the South Carolina Governor's Management Review Commission found that the interchange of maintenance services between the State Department of Education (SDE) and the South Carolina Department of Highways and Public Transportation (SCDHPT) would result in cost savings. In 1978, DMVM conducted a feasibility study which indicated that substantial savings could result from consolidating maintenance facilities in the Columbia area. Also, a consultant hired by DMVM suggested test sites for consolidation to include facilities in the Columbia, Florence and Charleston areas. However, the board has not examined the cost effectiveness of consolidating facilities and/or developed a consolidation plan.

In this review, we attempted to assess the feasibility of consolidating maintenance facilities. However, information maintained by facilities and other state entities did not allow such an analysis.

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The Budget and Control Board has not examined the cost effectiveness of consolidating facilities and/or developed a consolidation plan.

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First, we attempted to assess the capacity (actual mechanic hours to available hours) of maintenance facilities to perform routine and unscheduled maintenance functions.

We reviewed in detail the FY 90-91 service order registers which include information on labor costs of some Columbia area facilities located in the Broad River Road area (the State Law Enforcement Division and the Department of Corrections) and in the vicinity of Farrow Road (the Department of Mental Health, the Department of Mental Retardation and the Department of Health and Environmental Control). Because agency records contained inconsistent data which did not allow a direct correlation to be made between repair hours, labor rates, and the numbers of FTE mechanics employed, we were unable to use the data to determine facility capacity. A DMVM survey concerning facility capability was not useful because it dealt only with the ability of facilities to perform specific repairs (i.e, wheel alignments).

Finally, we attempted to determine the market value of facilities to assess their value to the state in the event of either closure or merger with another facility. According to officials of the Budget and Control Board, information on the market value of facilities is not maintained. Although, a property management section official told us that replacement costs information is available, these costs include the value of the building with no consideration of land value.

At a minimum, start-up costs for a new maintenance facility include maintenance bays (stations for repairs), staffing, and repair parts stockage. After capital is invested to establish the facility, closure or merger of that facility requires consideration of costs including: moving from one facility to another; clean-up of the closed facility; and renovation (storage of additional parts, supplies and vehicles, etc.). Also, accessibility to users of the facility being closed needs to be considered.

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## Establishment of New Maintenance Facilities

As noted, the Budget and Control Board is mandated to ensure that maintenance services are not duplicated. However, the board has not established regulations requiring justification of need prior to establishment of a agency maintenance facility or evidence that maintenance needs could not be served by an existing facility. An agency maintenance official told us that one satellite office within an agency began installing equipment to open a new facility. According to this official, the project was halted by an agency administrator when it was

concluded that the maintenance needs of that office could be served by existing facilities.

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The Budget and Control Board has not established regulations requiring justification of need prior to agency establishment of maintenance facilities.

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In July 1992, DMVM attempted to control the process by including agency justification for new facilities as a part of its certification process. A new facility must be approved by the state fleet manager six months before agencies can use it for repairing or servicing state cars. However, this policy is not addressed by statute or regulation.

Lack of control over the creation of new maintenance facilities may result in unnecessary expenditure of state funds. Further, as noted, after a facility is established, the state may incur additional costs to close or to merge that facility.

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## Recommendations

- 13 The General Assembly may wish to consider enacting legislation which requires state agencies to justify the need for a new maintenance facility through the budget process.
- 14 In accordance with state law, the Budget and Control Board should promulgate regulations to ensure that maintenance facilities within a reasonable distance are not duplicating services. The regulation should, require a cost analysis of the proposed maintenance facility to ensure that the agency needs can be provided more economically than by an existing facility, state or private.

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**Chapter 2**  
**State Vehicle and Equipment Maintenance Facilities**

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# Use of State-Owned Vehicles

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## Inefficient Use of Vehicles

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Given the low annual business mileage and the usage data reported on the survey, the vehicles identified appear to be inefficiently used.

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The Motor Vehicle Management Act requires the Budget and Control Board to develop a comprehensive state fleet management program. Among the objectives set forth in the statute, are achieving maximum cost-effective management of the fleet and eliminating the use of privately-owned vehicle (POV) reimbursement when this use is more costly than the use of state vehicles (see p. v). We were asked to identify waste in the use of state-owned vehicles and make recommendations. This chapter discusses waste and inefficiency in the use of state vehicles. Waste exists in the areas of permanent assignment, motor pool assignment, size of the fleet, use of police vehicles, and commuting.

Using the criteria discussed in Appendix B, we examined two major categories of vehicles. First, we reviewed permanently-assigned passenger sedans, station wagons, and trucks 3/4 ton or less. Second, we reviewed sedans, station wagons and trucks assigned to either a motor pool or office or unit within a state agency. Table 3.1 shows the number and percent of the active vehicles which met the tests to be included in our analysis and failed to meet the test of minimum mileage, indicating they may be underutilized.

It should be noted that we are using self-reported data from 102 state agencies in this analysis. Due to time constraints, the number of agencies, and the number of vehicles identified, we were unable to conduct a detailed follow-up. However, given the low annual business mileage and the usage data reported on the survey, the vehicles we identified appear to be inefficiently used.

Table 3.1: Vehicles Not Meeting Mileage Criteria by Type

Mileage Criteria Per Year	Permanently-Assigned Passenger Sedans	Pooled Passenger Sedans	Permanently-Assigned Trucks	Pooled Trucks	Total
8,000 <sup>a</sup>	77 (10.6%)	80 (5.8%)	9 (1.9%)	141 (10.4%)	307
14,600 <sup>b</sup>	280 (38.5%)	•	49 (10.4%)	•	329
12,142 <sup>c</sup>	•	234 (17.1%)	•	•	234
9,375 <sup>c</sup>	•	•	•	174 (12.8%)	174

- a Minimum yearly mileage suggested by consultant.
- b DMVM suggested minimum mileage for a permanently-assigned vehicle.
- c Minimum yearly mileage needed to meet DMVM disposal criteria.

329 (27%) of 1,198 permanently-assigned vehicles we analyzed do not meet DMVM minimum annual mileage criteria for assignment.

408 (15%) of 2,731 motor pool and office vehicles we analyzed do not meet DMVM minimum annual mileage criteria.

In addition to providing state vehicles to employees for business use, the state also reimburses employees for the business use of their automobiles. The state paid at least \$11.5 million, or the equivalent of 45 million business miles, in POV reimbursement to state employees in FY 91-92.

According to DMVM's disposal criteria, a full-size passenger sedan should be driven a minimum of 85,000 miles and be at least five years old before it is considered for disposal. Thus, the vehicle can average 17,000 business miles per year without exceeding its expected use. For trucks, the average is 15,000 miles per year.

All the vehicles discussed below were driven less than the minimum yearly mileage needed to meet DMVM's disposal criteria. When a vehicle is not driven to capacity, while at the same time an employee is being reimbursed for the business use of his/her private automobile, the state is needlessly expending funds for the reimbursement.

We calculated the POV savings that could be achieved if the vehicles discussed below had been driven to capacity. For example, if a vehicle driven 8,000 miles per year were moved to a situation where it were driven 17,000 miles per year, the state could reduce POV expenditures by 9,000 miles or \$2,295 at the current POV rate of 25.5¢ per mile. We estimate that if the vehicles discussed below had been driven the 15,000 to 17,000 miles per year recommended under the disposal criteria, the state could have reduced its POV expenditures by between \$800,000 to \$1.5 million.

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## More Efficient Use of Permanently-Assigned Vehicles

As shown in Table 3.2, we identified 77 permanently-assigned passenger sedans and 9 permanently-assigned trucks which reported being driven less than 8,000 business miles per year. Using criteria recommended by DMVM to justify permanently assigning a state vehicle to an employee, we identified 280 passenger sedans and 49 trucks which reported being driven less than 14,600 miles per year.

A high percentage of respondents reported having only one driver per week and carrying only the driver. This is consistent with the vehicles' permanent assignment status (see Table 3.3). However, while a large percentage report commuting in their state vehicles, few report more than five after-hour callouts per month. In its FY 90-91 management review, DMVM stated that 24-hour, on-call status was not, in itself, sufficient justification for permanently assigning an automobile. DMVM further stated that infrequent callbacks would not justify the expense incurred by the state when an on-call employee drives his vehicle home every night.

According to our survey data, 90% of the vehicles used to commute were permanently assigned. Ninety-five percent of those who reported that commuting comprised more than 50% of their total mileage were permanently-assigned vehicles (see p. 37).

Given the low level of actual callouts reported on the survey, it appears that it may be more efficient to have these callouts responded to in the employee's personal vehicle, for which he/she could be POV-reimbursed. Up to 44% of our respondents reported a willingness to be POV-reimbursed, and up to 22% reported using their own cars when state cars were not available.

Table 3.2: Permanently-Assigned Passenger Sedans and Trucks

Percent Reporting	Passenger Sedans Less Than 8,000/Year	Passenger Sedans Less Than 14,600/Year	Trucks Less Than 8,000/Year	Trucks Less Than 14,600/Year
Total Vehicles	77	280	9	49
One Driver Per Week	75%	85%	56%	76%
No. of Passengers Equals One (Includes Driver)	70%	79%	67%	78%
Commuting From Home to Office	77%	61%	22%	10%
Five or Less After-Hour Callouts Per Month	83%	85%	100%	98%
More Than 50% of Their Mileage is Local <sup>a</sup>	46%	41%	89%	71%
Willingness to be POV Reimbursed at Least Some Percentage of Time	25%	20%	44%	25%
Use Own Car When State Car Not Available	21%	17%	22%	18%

a Local was defined as within 30 miles of their office.

### More Efficient Use of Motor Pool or Office Vehicles

As a result of the survey, we identified 221 vehicles assigned to a motor pool or office which were reported as being driven less than 8,000 miles per year. Using DMVM's disposal criteria, we identified 234 passenger vehicles which were reported as being driven less than the minimum 12,142 miles per year. We found 174 trucks which were driven less than the minimum annual mileage of 9,375.

Respondents who reported on general use vehicles noted a large number of different drivers per week, and usually at least one additional passenger other than the driver. Also, very few of the vehicles were reported as being used to commute or for after-hour callouts.

A significant percentage of respondents (see Table 3.3) reported a willingness to use their personal vehicle for business travel and up to 35%

reported using their own cars when a state car was unavailable. Also, nearly half reported that more than 50% of their mileage was local. This usage pattern indicates that employees may be able to accomplish their tasks by using their personal vehicles and being POV-reimbursed rather than making minimal use of pooled vehicles.

**Table 3.3: Motor Pool or Office Vehicles**

Percent Reporting	Passenger Sedans Less Than 8,000/Year	Passenger Sedans Less Than 12,142/Year	Trucks Less Than 8,000/Year	Trucks Less Than 9,375/Year
Total Vehicles	80	234	141	174
Two or More Drivers Per Week	70%	71%	72%	70%
Carrying at Least Two People (Includes Driver)	51%	50%	52%	49%
Commuting From Home to Office	4%	1%	1%	1%
Five or Less After-Hour Callouts Per Month	98%	98%	96%	97%
More Than 50% of Their Mileage is Local <sup>a</sup>	33%	27%	84%	84%
Willingness to be POV Reimbursed at Least Some Percentage of Time	63%	66%	13%	11%
Use Own Car When State Car Not Available	33%	35%	19%	18%

a Local was defined as within 30 miles of their office.

## Recommendations

- The Budget and Control Board should direct the Division of Motor Vehicle Management to review vehicles identified as being underutilized, on a case-by-case basis, to confirm vehicles that could be more efficiently used.

- 16 Once identified, the Budget and Control Board should require these vehicles to be reassigned to individuals or motor pools in which maximum cost-effective use of the vehicles will be achieved.
- 17 Agency purchasing and replacement requests should not be approved by the Division of Motor Vehicle Management unless the agency's existing vehicles are meeting utilization and/or mileage criteria set forth by DMVM.
- 18 A consolidated database should be used at the Division of Motor Vehicle Management to enable the fleet manager to adequately manage the fleet and ensure the most cost-effective use of state vehicles. The Division of Motor Vehicle Management should work with the Research and Statistical Services division of the Budget and Control Board in automating record-keeping adequate for managing the fleet and the needs of auditors and other analysts.

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## Commuting

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In our 1991 review of the Motor Vehicle Management Act we recommended that the General Assembly consider eliminating commuting, limiting commuting, or charging state employees for commuting. For this review, we have updated information on commuting use.

In FY 90-91, 2,252 state employees reported commuting in state vehicles. This is a decrease of 2% from the 2,296 employees who reported commuting in FY 89-90. Approval authority for commuting rests with individual agency heads. We estimate these employees drove approximately 5 million commuting miles. Of those who said they commute, 581 reported the commuting as additional income for tax purposes, accounting for approximately 1.3 million of the total commuting miles. The remaining employees claimed to be exempt from reporting because they met one of the Internal Revenue Service's exemptions. If the state were to charge non-exempt employees for their commuting, we estimate the state could collect \$361,000 annually based on the value of the commuting that was reported. Increased administrative costs associated with collection may be negligible since information on the value of commuting is already being reported.

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If the state were to charge non-exempt employees for their commuting, we estimate the state could collect \$361,000 annually.

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We surveyed the 12 state agencies with the largest fleets, excluding DMVM, and asked what an appropriate limit would be for commuting.

Of the six who responded, the commuting limit ranged from 0 to 36 miles per day round-trip. A limit of 36 miles per day equates to approximately 9,000 miles per year. Of the 581 individuals reporting commuting, 21 (3.6%) reported commuting more than 9,000 miles per year. If the 3.6% of the exempt commuters also traveled more than 9,000 miles per year, it would mean a total of 81 state employees commuted more than 9,000 miles per year. We estimate that if these individuals were charged for the commuting miles over 9,000, the state could collect \$70,000.

DMVM suggests a limit of 30 miles per day round-trip which would equal approximately 7,500 miles per year. Under this limit, we estimate there are 108 state employees commuting more than 7,500 miles per year and that the state could collect \$110,000 if it charged for the excess commuting miles.

Eliminating or placing a limit on commuting could lead to reduced operating costs for state vehicles. According to a DMVM official, the direct cost of operating a DMVM vehicle is 19.1¢ per mile. Direct costs include fuel, depreciation, maintenance, parts, and insurance. They do not include any overhead costs. Thus, if the state were to eliminate commuting for non-exempt state employees, we estimate the state could save approximately \$250,000 annually in direct operating costs.

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If commuting for non-exempt state employees were eliminated, the state could save \$250,000 annually in direct operating costs.

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Further, eliminating commuting could help to reduce insurance costs. According to an official with the Insurance Reserve Fund, employees authorized to commute who have an accident while commuting are covered by the state's insurance.

Also, according to our survey data, 90% of the vehicles used to commute were permanently assigned. In addition, of the 38 who reported that commuting comprised more than 50% of their total mileage, 36 vehicles were permanently assigned. According to DMVM, permanent assignment is the most inefficient use of a motor vehicle. Eliminating or limiting commuting could lead to fewer permanent assignments and increased efficiency in the use of state vehicles.

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## Recommendations

- 19 The General Assembly may wish to consider charging non-exempt state employees for commuting in their state vehicles or eliminating commuting in state vehicles.
- 20 In addition, the General Assembly may wish to consider placing a limit on commuting miles for exempt employees.
- 21 The Budget and Control Board should place approval authority for commuting with the state fleet manager.

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## Downsizing

There are over 700 full-size sedans and/or station wagons in the state fleet, 200 of which are police vehicles being used by non-law enforcement agencies. The Energy Conservation and Efficiency Act, passed by the General Assembly in 1992, prohibits the future purchase of full-size sedans and station wagons for non-police use and requires that full-size police sedans be used only by law enforcement officers as defined in the Internal Revenue Code. These provisions require downsizing these vehicles to mid-size models. The Division of Motor Vehicle Management (DMVM) estimates this will save the state over \$440,000 per year.

By applying a test of average occupancy to seating capacity, we identified further vehicles for downsizing in addition to those identified in the Energy Conservation and Efficiency Act. Savings from additional downsizing could average an estimated \$279,000 per year.

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760 additional potential candidates for downsizing could save \$279,000 annually.

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- We analyzed five different categories of vehicles using a test of average occupancy compared to seating capacity and identified 760 more potential candidates for downsizing to a smaller, more cost-effective model. This figure includes vehicles already identified in other parts of the report as candidates for more efficient use.

Using DMVM cost savings figures, we estimate that downsizing these vehicles to the smallest model appropriate for their usage requirements would result in a total savings of approximately \$1.4 million over the life of the vehicles. This represents an additional \$279,000 annually to the savings resulting from implementation of the energy act.

- 218 respondents to our survey indicated a *preference* for a smaller vehicle. If we exclude 63 of these who are affected by the energy act provisions, and 39 for which no cost-effective alternative was available, downsizing the remaining 114 vehicles to the next appropriate cost-effective model would save the state an estimated additional \$52,600 per year.
- For non-law enforcement sedans and station wagons already downsized one level by the energy act, we examined for further downsizing those used primarily to transport state employees and other passengers, comparing average occupancy to vehicle seating capacity. We identified 148 permanently-assigned sedans and station wagons that usually carry only the driver; if these vehicles were downsized to a compact, rather than mid-size model, we estimate the state could save up to \$37,600 more per year. Using the same criteria, a total of 56 station wagons assigned to either a motor pool or an office could be downsized, saving another \$34,000 per year.
- We compared average occupancy to seating capacity of large passenger vans that do not carry supplies and found 217 that could be downsized to the next smaller model and 114 that could be downsized to the smallest model van. This would represent an additional estimated savings to the state of over \$137,500 per year.
- In reviewing non-passenger vehicles that are primarily used for transporting state employees rather than supplies, we located 70 that usually carry only the driver. We estimate that downsizing these vehicles to the next smaller cost-effective model could save the state another \$21,000 per year.

Since 1972, downsizing recommendations have been made in most reports on the state motor vehicle fleet. A DMVM management review published in 1991, our 1991 audit report on the Motor Vehicle Management Act, and our 1992 report on cost savings for state government all recommended downsizing state fleet vehicles. DMVM is currently preparing guidelines for relating type and size of vehicle to job function.

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## Recommendation

- 22 The Budget and Control Board should propose regulations that establish criteria for type and size of vehicle related to job function and provide the fleet management authority to take enforcement actions relative to compliance. These criteria should apply to both replacement vehicles and new acquisitions.

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## Spare Highway Patrol Vehicles

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SCDHPT could save approximately \$141,000 annually by selling 80 highway patrol vehicles currently classified as "spares" and dropping unnecessary insurance coverage on 388 other inactive patrol vehicles.

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The South Carolina Department of Highways and Public Transportation (SCDHPT) could save approximately \$141,000 annually by selling 80 highway patrol vehicles currently classified as "spares" and dropping unnecessary insurance coverage on 388 other inactive patrol vehicles. These changes can be made without compromising the patrol's mission. In addition to the annual savings, proceeds from the sale of these vehicles could be approximately \$200,000 based on recent department vehicle sales. While the highway patrol also incurs substantial vehicle costs associated with off duty time, these costs may be unavoidable without impacting the patrol's mission.

As of August 1992, the highway patrol had 202 vehicles designated as "spares" for the patrol districts, headquarters, and special teams. Spares are used as substitutes for cars that are temporarily out of service due to maintenance or repair. One way to estimate the proper number of spares is by computing the percentage of available time that cars are out of service and applying that percentage to the number of assigned vehicles. We analyzed the patrol's spare vehicle fleet using this method, but, based on our review of other states and of SCDHPT, we allowed each patrol district a minimum of 10% spares to assigned vehicles and allowed for fleet additions and deletions. The patrol reported over 260,000 hours of downtime for its vehicles during FY 90-91. Table 3.4 presents an analysis of the FY 90-91 downtime and current spare vehicle assignments by highway patrol division.

Table 3.4: Analysis of SCDHPT Patrol Vehicle Downtime and Spare Vehicles

Organization	FY 90-91			As of August 1992		Spare	
	Hours Available	Downtime	% Downtime	Vehicles Assigned	Spare Assigned	Needed	Add (Deduct)
Patrol H.Q./Training	333,040	36,889	11.08	165	50	18	(32)
District 1	436,380	100,527	23.04	142	20	33	13
District 2	404,553	14,506	3.59	107	32	11	(21)
District 3	484,873	26,541	5.47	150	18	15	(3)
District 4	352,437	18,565	5.27	106	20	11	(9)
District 5	406,727	19,532	4.80	142	18	14	(4)
District 6	344,021	21,682	6.30	107	25	11	(14)
District 7	300,767	21,846	7.26	90	19	9	(10)
<b>Total SCDHPT</b>	<b>3,062,798</b>	<b>260,088</b>	<b>8.49</b>	<b>1,009</b>	<b>202</b>	<b>122</b>	<b>(80)</b>

Overall, highway patrol cars were out of service 8.5% of the time available during FY 90-91. This percentage is based on 2,080 hours of available time per car, per year. SCDHPT's spare-to-active vehicle ratio is approximately 20%. A reduction of 80 vehicles can be accomplished without affecting the patrol's capabilities because the remaining 122 spares would leave a 12% overall spare-to-assigned vehicle ratio. Also, because these vehicles are spares, every officer will continue to be assigned a car. In addition, the net proceeds from the sale of spare cars could be \$200,000, based on the average of 1992 patrol cars sold at public auction. Selling the extra spares will save the department \$24,000 per year on insurance.

The highway patrol does not have a written policy for calculating the appropriate number of spare patrol vehicles. At least three southeastern states maintain lower ratios of spares to assigned vehicles. North Carolina reported 1,245 assigned patrol vehicles and 50 (4%) spares. Mississippi reported 510 assigned vehicles with 25 spares (5%). Georgia reported 816 assigned vehicles and approximately 30 spares (4%). After eliminating 80 spares, the SCDHPT would still have 122 (12%) spares. During the exit process, an official with the Highway Patrol indicated that a reduction of 20 spare cars statewide, would not compromise the patrol's mission.

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## Unnecessary Patrol Vehicle Insurance

The department could save approximately \$141,000 per year by insuring only patrol vehicles on active, special, or spare status. Currently, the department insures all of its cars, even those awaiting disposal. The highway patrol has reached its planned strength of 1,000 officers, so the fleet size should be stable. With 1,009 assigned cars and 122 spares, the appropriate number to insure would be 1,131. When the department renewed its insurance in April 1992, it insured 1,599 patrol cars. Using the premium of \$302 per car, the department could save \$141,000 per year by dropping coverage on 468 vehicles.

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## Recommendations

- 23 The South Carolina Department of Highways and Public Transportation should develop a written policy for calculating the appropriate number of spare vehicles. Such a policy should consider the historic and planned fleet downtime.
- 24 The South Carolina Department of Highways and Public Transportation should dispose of any spare highway patrol vehicles found to be unnecessary.
- 25 The South Carolina Department of Highways and Public Transportation should insure only active patrol cars and an appropriate number of spare vehicles.

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## SLED Vehicle Assignments

The South Carolina Law Enforcement Division (SLED) has 268 special agents and criminalists. Each of these individuals is assigned a state-owned vehicle, which in most cases is an unmarked, full-size sedan. We reviewed the SLED vehicle assignments and surveyed 165 of these individuals to get information on the actual use of vehicles. We found that many SLED employees use their state vehicles largely for commuting between home and the office. In many cases, these vehicles are used four hours or less per day. In addition, SLED's practice of assigning vehicles to forensic services personnel is unlike the general policies of comparable law enforcement agencies in other southeastern states. We also noted some vehicle assignments which may not be justified based on law enforcement needs.

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## Commuting Use

Seventy-five of the 165 (45%) SLED employees whom we surveyed use their vehicles to commute to offices in the Columbia area three or more times each week. Ten of these 75 individuals reported that commuting accounts for at least half of the vehicle's total use. SLED agents, by virtue of being law enforcement personnel, are generally exempt from reporting their personal use of state-owned vehicles for federal income tax purposes. On our survey, SLED personnel reported approximately 592,000 average annual commuting miles. Our survey did not measure other types of personal use such as lunch trips and errands, but it is logical to assume that some of these cars are also used for these purposes. The cost to the state of the reported commuting miles alone may be approximately \$130,000 per year.

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## Candidates for Pooling

Forty of the 75 (53%) who reported commuting three or more days per week also reported that on days when the vehicle is used, it is normally used less than four hours. These vehicles may be better used if assigned to a central motor pool. Pooling could also reduce fleet costs by eliminating the personal use of these vehicles. The Tennessee Bureau of Investigations (TBI) reported that in FY 90-91, as a result of budget problems, they eliminated about 35 cars and pooled 20 that had been assigned to individuals. They estimate the annual savings from these changes to be \$127,000.

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## Vehicle Assignment Policy

SLED's practice of assigning vehicles to forensic services personnel is unlike the general practices of comparable law enforcement agencies in the other southeastern states. We contacted the state investigative law enforcement agencies in Florida, Georgia, Alabama, North Carolina, Tennessee, Mississippi, and Virginia to compare their motor vehicle practices to those of SLED. Like SLED, each of these organizations assigns vehicles to their law enforcement agents on a take home basis. However, forensic services personnel are generally not assigned vehicles. They must use motor pool vehicles when needed. SLED policy provides that its forensic services personnel shall be "certified law enforcement officers." Of the other seven southeastern states, Alabama, North Carolina, and Tennessee consider their forensic personnel to be law enforcement officers. Even these states do not generally assign vehicles to forensic personnel.

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Eighty-four forensic services division employees at SLED have state vehicles assigned to them (see Appendix J). Forty-seven of these individuals reported using their vehicles to commute to and from the Columbia office three or more days per week. Thirty of these individuals also reported using the vehicles four hours or less per day. Of the 592,000 commuting miles reported on our survey, 368,000 (62%) were reported by forensic services personnel. As noted earlier, these vehicles might be better used in a motor pool arrangement.

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## Questionable Vehicle Assignments

In addition to the forensic services vehicle assignments, we identified some additional assignments which do not appear justified based on the individuals' job titles. For example, vehicles are assigned to the following personnel:

- Data processing supervisor, and two data processing department employees.
- Central records section supervisor.
- Garage supervisor.
- Four pilots.
- Public information supervisor.
- Training supervisor.
- Administrative supervisor of the Criminal Justice Information and Communications System.
- Administrative coordinator in charge of purchasing, budget, payroll, and garage services.

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We question the assignment of vehicles to individuals whose functions appear to be primarily administrative or support.

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We question the assignment of vehicles to individuals whose functions appear to be primarily administrative or support.

We also found a situation involving a married couple where both partners work in the Columbia office, both have assigned vehicles, and both reported commuting in the assigned vehicles. Both partners in this case are supervisors within the same division. We noted three other couples where both partners have assigned vehicles. However, in these cases it appears that the individual duty assignments may justify separate vehicles.

SLED justifies its vehicle assignments based on law enforcement and public safety needs. These needs may differ from those of other agencies. According to a SLED official, some agents whose current job assignment may be administrative also have important secondary law enforcement roles.

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## Recommendations

- 26 The South Carolina State Law Enforcement Division should revise its policy of vehicle assignments so that individuals whose primary duties are administrative, forensic, or support either use pooled vehicles or are reimbursed for business use of their own vehicles.
- 27 The South Carolina State Law Enforcement Division should review each vehicle assignment to determine if it complies with the revised policy.

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**Chapter 3**  
**Use of State-Owned Vehicles**

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# Appendices

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# Analysis of Mechanic Staffing

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## United States Air Force Vehicle Equivalent System

The USAF has a system for calculating the optimum maintenance staff needed by a given fleet of vehicles and equipment. The system, called the "vehicle equivalent" technique, relates the annual maintenance labor needs of many different types of vehicles and equipment to those of a standard sedan. The standard sedan is allotted 25.5 maintenance hours per year. The 25.5 hours assigned to sedans includes 16.6 (65%) hours for preventive maintenance, 6.3 (25%) hours for major repairs, and 2.6 (10%) for body repairs. All other vehicle and equipment types are assigned equivalents in direct relationship to their annual maintenance requirements compared with the sedan. For example, a vehicle that requires 51 hours of maintenance per year has an equivalent twice that of the standard sedan. Mechanic time required by a given fleet is calculated by multiplying the quantity of each item by its equivalent and by 25.5. The value of one equivalent can be adjusted if some maintenance functions are not performed by the facility.

According to *Runzhiemer Reports on Fleet Maintenance and Safety* magazine, the USAF amounts were determined from data compiled through several fleet management studies. Many cities and other government agencies use the vehicle equivalent technique for maintenance manpower planning. This system is also known as the "Phoenix System" because Phoenix Arizona was the first to apply the USAF technique to its fleet.

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## Legislative Audit Council Analysis

We obtained vehicle and equipment inventories for each of the agencies. We also obtained USAF manual 77-310 listing the appropriate USAF items and their equivalents. We assigned USAF equivalents to each state vehicle and equipment type. In all cases we attempted to make the most conservative match (i.e., a higher equivalent value) between the USAF description and the agency description of the item. In some cases, there was no clear match. In these cases, we substituted labor estimates provided by the agencies.

We reduced the annual per-sedan figure by 10% to 22.95 hours, because most state maintenance facilities do not perform body work. The exceptions to this are SDE and the Forestry Commission facilities. Total annual mechanic labor hours needed by each agency were calculated by

multiplying the quantity of each item by its assigned equivalent and either 22.95 or 25.5 hours as appropriate.

We developed an estimate of the net time that one FTE mechanic is available to work on vehicles and equipment. Using a 40-hour work week and 52 weeks per year, we subtracted normal holidays and estimates of leave and breaks. We estimate that one FTE mechanic is available approximately 1,700 (82%) hours out of 2,080 per year.

We divided the annual maintenance hours required for each agency by 1,700 to determine the number of FTE mechanics required. The required FTEs were then compared to the actual FTEs, calculated earlier, to determine if the agency appeared overstaffed or understaffed for full-state service maintenance (see Table 2.4).

# Analysis of Survey Information

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## Methodology

There is no statewide database which can be used to analyze vehicle use. In order to collect statewide data on the fleet, we used an approach that had been used in at least three other states to identify inefficiently used vehicles. This approach involved distribution of a questionnaire on each vehicle to the person most familiar with the vehicle's use.

We contracted with a private consultant to assist us in developing a questionnaire that would collect the information needed to determine if the vehicles were being used efficiently. In addition, we submitted the questionnaire to the fleet managers of the 12 state agencies with the largest number of state vehicles for their review. The final questionnaire is included in Appendix E. We contracted with the University of South Carolina's statistical laboratory for data entry and used a private consultant to assist us in developing criteria useful in identifying vehicles that could be used more efficiently.

In analyzing survey data to determine if a vehicle was a candidate for more efficient use, we reviewed the survey data on 8,500 active vehicles. For analysis of permanent assignment vehicles, we had 728 passenger sedans and 470 trucks that fell into our test pool. For analysis of pooled vehicles, we had 1,370 passenger sedans and 1,361 trucks that fell into our test pool. We excluded for further analysis vehicles that did not meet certain tests we established.

We included in our analysis only those vehicles whose drivers reported 100% of their use to be either commuting or day-to-day work activities or a combination of these two categories.

We excluded, to be conservative, vehicles which reported any use in the categories of transporting clients or supplies. Also, vehicles used for law enforcement activities, specialized purposes, or "other" purposes were excluded from this analysis. Thus, only vehicles whose primary purpose, as reported on the survey, could conceivably be performed by the person's private automobile were considered in these analyses as possible candidates for more efficient use.

We included in our analysis vehicles whose reported total yearly business mileage was less than the minimum yearly business mileage recommended by our consultant or by DMVM.

We applied four different mileage tests depending on the type and assignment of the vehicle. DMVM recommends disposal of a full-size passenger sedan after 85,000 miles or seven years. Thus, a vehicle would have to average 12,142 miles per year to meet the disposal criteria. Our consultant suggested, because state vehicles are often used in small geographic locations, vehicles driven less than 7,000 to 8,000 miles per year be reviewed. Trucks would have to average a minimum of 9,375 business miles per year to meet DMVM's disposal criteria. Table 3.1 shows how many of the 2,098 active sedans and 1,831 active trucks failed to meet the various criteria. For vehicles which are permanently-assigned to an individual, DMVM recommends a minimum of 14,600 business miles be driven a year.

We surveyed the 12 state agencies with the largest vehicle fleets. For those that reported a minimum number of miles which should be placed on a pooled vehicle, the range was from 8,000 to 20,000 miles per year.

We included in our analysis only those vehicles which fell within the maximum age limit as recommended by DMVM's disposal criteria.

According to DMVM's disposal criteria, the maximum age of disposal for full-size sedans and station wagons is seven years. Therefore, our survey consisted of vehicles which were model years 1985 to 1991. The maximum age for trucks 3/4 ton or less is eight years. Thus, for trucks, we confined our analysis to models years 1984 to 1991.

In addition to meeting the mileage criteria, we examined the vehicles' usage characteristics. We reviewed the number of different drivers per week, the number of passengers carried, whether or not the vehicle was used to commute, and the number of after-hour callouts. We also examined the percentage of the employee's business travel that was local (i.e. within 30 miles of the employee's home office), the willingness of the employee to use his own vehicle for business travel, and whether or not the employee used his own vehicle for business travel when a state car was not available. Table 3.2 summarizes these responses by vehicle type

and mileage criteria for permanently-assigned vehicles and Table 3.3 summarizes this data for general use vehicles.



# Maintenance Facilities Breakdown

County	City	SDE	DHPT	Other
Abbeville	Abbeville	1	1	
Aiken	Aiken	1	1	
Allendale	Allendale		1	
Anderson	Anderson	1	1	1 DMH
	Pendleton			1 Clemson
Bamberg	Bamberg		1	
	Denmark			1 Denmark Tech
Barnwell	Barnwell		1	
	Blackville	1		1 Clemson
Beaufort	Beaufort		1	
	Burton	1		
Berkeley	Moncks Corner	1	1	
Calhoun	St. Matthews	1	1	
Charleston	Charleston	1	2	1 Citadel 1 Clemson 1 Wildlife 1 College of Charleston 1 MUSC <sup>a</sup>
	Ladson			1 DMR
Cherokee	Gaffney	1	1	
Chester	Chester	1	1	
Chesterfield	Chesterfield	1	1	
	Patrick			1 Forestry
Clarendon	Manning	1	1	
Colleton	Walterboro	1	1	1 Forestry
Darlington	Darlington	1	1	
Dillon	Dillon		1	
	Latta	1		
Dorchester	St. George	1	1	
	Summerville	1		
Edgefield	Edgefield		1	
	Johnston	1		
	Trenton			1 Forestry

**Appendix D  
Maintenance Facilities Breakdown**

County	City	SDE	DHPT	Other
Fairfield	Winnsboro	1	1	
Florence	Florence	1	1	1 Clemson 1 Forestry 1 DMR 1 Francis Marion
Georgetown	Georgetown	1	1	1 Clemson
Greenville	Greenville	1	1	1 Greenville Tech
	Taylors	1		
Greenwood	Greenwood	1	1	1 Piedmont Tech 1 Lander College
Hampton	Hampton		1	
	Brunson	1		
Horry	Conway	1	1	1 USC Coastal
Jasper	Ridgeland		1	1 Forestry
Kershaw	Camden	1	1	1 Forestry
Lancaster	Lancaster	1	1	
Laurens	Laurens	1	1	
	Clinton			1 DMR
Lee	Bishopville	1	1	
Lexington	Lexington	1	1	
Marion	Marion		1	
Marlboro	Bennettsville	1	1	
McCormick	McCormick		1	1 John de la Howe
Newberry	Newberry	1	1	1 Forestry
Oconee	Walhalla	1		
	Seneca		1	
	Salem			1 Forestry
Orangeburg	Orangeburg	1	1	1 Forestry
	Holly Hill		1	
Pickens	Pickens	1		3 Clemson
	Arial		1	

**Appendix D  
Maintenance Facilities Breakdown**

County	City	SDE	DHPT	Other
Richland	Columbia	2 <sup>b</sup>	2 <sup>b</sup>	1 Aeronautics 1 Corrections 1 DHEC 1 DMVM 1 ETV 1 Forestry 1 General Services 2 DMH 1 DMR 1 SLED 1 USC 1 DYS 1 Midlands Tech 1 Criminal Justice Academy
	Pontiac			1 Clemson
	Hopkins	1		
Saluda	Saluda		1	
Spartanburg	Spartanburg		1	1 Deaf & Blind School 1 Forestry
	Fairforest	1		
	Converse	1		
Sumter	Sumter	1	1	
	Wedgefield			2 Forestry
Union	Union	1	1	
Williamsburg	Kingstree	1	1	1 Forestry
York	York	1	1	
	Rock Hill		1	
<b>Total</b>		<b>45</b>	<b>50</b>	<b>53</b>

- a The Medical University of South Carolina facility closed as of July 1992.  
b Includes one SDE and one DHPT equipment depot.

# Statewide Questionnaire: Results Tabulated for Active Vehicles

## STATE OF SOUTH CAROLINA STATE VEHICLE QUESTIONNAIRE

**INSTRUCTIONS:** At the request of the Legislature, the Audit Council is conducting a study of the state's motor vehicle fleet. This questionnaire is being distributed to determine how cost effective the state is in meeting the needs of state motor vehicle users. Please complete the questionnaire for the vehicle identified above. This questionnaire should be filled out by the individual most knowledgeable about the vehicle's use. Carefully think about how the vehicle is used and answer the questions as accurately and completely as possible. Do not leave questions unanswered. For questions which are not applicable, enter N/A. A random sample of questionnaires will be audited to ensure accuracy. Please complete the questionnaire and return it to your agency's survey coordinator no later than July 2, 1992. If you have any questions, contact your survey coordinator.

1. What is the status of this vehicle? (CHECK ONE)
  - 8521 1) Active \_\_\_\_\_
  - \_\_\_\_\_ 2) Inactive (Please explain) \_\_\_\_\_
  - \_\_\_\_\_ 3) Awaiting disposal \_\_\_\_\_
  - \_\_\_\_\_ 4) Unable to locate (Please explain) \_\_\_\_\_
  - \_\_\_\_\_ 5) Replaced with another vehicle. (If this vehicle has been replaced and the above license plate number applies to a new vehicle STOP HERE.) \_\_\_\_\_
2. What is the current odometer reading of this vehicle? Mean = 59,227
3. Is the current mileage greater than 100,000 miles? (CHECK ONE) 1) Yes 14% 2) No 86%
4. Is this vehicle: (CHECK ONE)
  - 21% 1) Permanently assigned to an individual?
  - 25% 2) Assigned to either an agency or departmental motor pool?
  - 51% 3) Assigned to a specific office or unit within a state agency (e.g. mailroom, section shed)?
  - 2% 4) Assigned to a private contractor?
  - 2% 5) Other (Please explain) \_\_\_\_\_
5. Estimate the percentage of mileage placed on this vehicle for: (NOTE: Total should equal 100%)
  - 2% 1) Transporting agency personnel between home and office.
  - 49% 2) Transporting agency personnel in the course of day to day agency work activities.
  - 11% 3) Transporting persons other than state employees (i.e. patients, inmates, clients).
  - 24% 4) Transporting supplies, materials or equipment.
  - 4% 5) Specialized purposes (i.e. garbage collection, medical).
  - 7% 6) Law enforcement activities (i.e. patrolling, surveillance).
  - 2% 7) Other (Please explain) \_\_\_\_\_
6. Estimate the percentage of mileage placed on this vehicle that is: (NOTE: Total should equal 100%)
  - 1) Local (within 30 miles of home office) 70%
  - 2) Non-local 30%
7. On days when the vehicle is used, approximately how many hours is it away from its daytime storage or parking location?
  - 1) Less than 1 hour 3%
  - 2) 1-2 hours 6%
  - 3) 3-4 hours 16%
  - 4) 5-6 hours 30%
  - 5) 7 hours or more 46%
8. How flexible is the user with respect to time of day this vehicle is used? (CHECK ONE)
  - 1) Very flexible 28%
  - 2) Somewhat flexible 33%
  - 3) Not flexible 39%
9. During which months of the year is this vehicle used on a regular basis?
  - 1) Year-round 8243
  - 3) Feb. \_\_\_\_\_ 5) April \_\_\_\_\_ 7) June \_\_\_\_\_ 9) August \_\_\_\_\_ 11) Oct. \_\_\_\_\_ 13) Dec. \_\_\_\_\_
  - 2) January \_\_\_\_\_ 4) March \_\_\_\_\_ 6) May \_\_\_\_\_ 8) July \_\_\_\_\_ 10) Sept. \_\_\_\_\_ 12) Nov. \_\_\_\_\_
10. How many days per month, on average, is this vehicle used? 20
11. Approximately how many miles is the vehicle driven during a typical month? 1184
12. Is this vehicle used to commute between home and office? (CHECK ONE) 1) Yes 10% 2) No 90%
13. If yes, is the driver exempt from reporting the commuting mileage as taxable income?(CHECK ONE) 1)Yes 43% 2)No 57%

**Appendix E  
Statewide Questionnaire: Results Tabulated for Active Vehicles**

**FOR QUESTIONS WHICH ARE NOT APPLICABLE ENTER N/A**

14. If this vehicle is used for commuting, estimate the total commuting mileage placed on this vehicle per year. 3664  
(NOTE: Even if the driver is exempt from reporting commuting mileage, estimate the total commuting mileage per year.)
15. If this vehicle is used for commuting, what is the distance, one way, between the employees home and office? 16  
(NOTE: Even if the driver is exempt from reporting commuting, give the number of miles.)
16. During a typical week, how many days is this vehicle used to commute? 4
17. If this vehicle is used for after-hour callouts, how many times per month, on average, does the user respond to these callouts? 4
18. Without removing essential supplies or equipment typically transported in this vehicle, how many people, including the driver, can this vehicle hold comfortably? 4
19. How many individuals, including the driver, does this vehicle usually carry? 3
20. During a typical week, how many different people drive this vehicle? (CHECK ONE)  
1) 1 37% 2) 2 30% 3) 3-5 28% 4) 6-10 4% 5) More than 10 1%
21. How important is this vehicle to the user's day-to-day work? (CHECK ONE)  
1) Essential 83% 2) Important 15% 3) Convenient 2% 4) Unnecessary 0%
22. Would a different size vehicle better meet the user's need? (CHECK ONE)  
1) Yes, larger 12% 2) Yes, smaller 3% 3) No 86%
23. Approximately what percentage of the individuals who use this vehicle on a regular basis would be willing to use their personal vehicle for work-related travel if reimbursed for that use? (CHECK ONE)  
1) 100% 3% 2) 75-99% 1% 3) 50-74% 3% 4) 25-49% 2% 5) 1-24% 8% 6) 0% 82%
24. When not in use, where is this vehicle usually stored? (CHECK ONE and indicate the city & zip code for the location.)  
During the day: 83% 1) State agency 3% 2) Other work site 9% 3) Home 5% 4) Other (Explain) \_\_\_\_\_  
At night & on weekends: 77% 1) State agency 2% 2) Other work site 17% 3) Home 5% 4) Other (Explain) \_\_\_\_\_  
City & zip code Largest = Columbia 25% City & zip code Largest = Columbia 24%
25. Where is this vehicle usually taken when repairs or preventive maintenance is required? (CHECK ONE)  
68% 1) Your agency's garage 8% 2) DMVM garage 1% 3) State agency other than your own or DMVM 22% 4) Private vendor 1% 5) Other (Explain) \_\_\_\_\_
26. How many miles is this from this vehicle's daytime storage location? 6.5
27. When this vehicle breaks down, is being serviced, or is otherwise unavailable, does the user: (CHECK ALL THAT APPLY)  
90% 1) Use another state vehicle? 22% 3) Ride with someone else? 0% 5) Use a taxi or public transportation? 17% 2) Use a personal vehicle? 18% 4) Not make trips? 3% 6) Other (Explain) \_\_\_\_\_

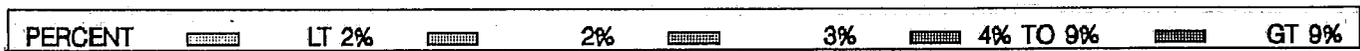
NAME OF PERSON COMPLETING QUESTIONNAIRE \_\_\_\_\_

TITLE & PHONE NUMBER \_\_\_\_\_

If you would like to make additional comments please use the space below. Confidential comments can be sent to: Perry Simpson, Senior Auditor, Legislative Audit Council, 400 Gervais St., Columbia, SC 29201.

\_\_\_\_\_  
\_\_\_\_\_

# Number and Percent of Total Vehicles by County



# Vehicle Use by Agency

Table G.1: Minimum and Maximum Number of Candidates For More Efficient Use By Agency

Agency	Minimum Number of Candidates for More Efficient Use	Maximum Number of Candidates for More Efficient Use	Total Active Vehicles	Percentage of Total Vehicles	
				Using Minimum	Using Maximum
Adjutant General, Office of the	1	1	19	5.26%	5.26%
Aging, SC Commission on	0	1	10	N/A	10.00%
Agriculture, SC Department of	2	5	32	6.25%	15.63%
Alcohol and Drug Abuse, SC Commission on	0	1	6	N/A	16.67%
Barber Examiners, State Board of	0	1	2	N/A	50.00%
Budget and Control Board, State					
Budget Division	1	1	1	100.00%	100.00%
Executive Director, Office of the	0	1	2	N/A	50.00%
Financial Data Systems	1	1	2	50.00%	50.00%
Fire Marshall, Division of State	0	4	20	N/A	20.00%
Fire Academy	0	2	6	N/A	33.33%
General Services, Division of	0	2	66	N/A	3.03%
Human Resource Management, Division of	0	1	2	N/A	50.00%
Information Resource Management, Division of	1	2	16	6.25%	12.50%
Internal Operations, Division of	1	1	2	50.00%	50.00%
Research and Statistical Services, Division of	1	2	14	7.14%	14.29%
Retirement Systems, SC	1	2	4	25.00%	50.00%
Citadel, The	2	2	49	4.08%	4.08%
Clemson University	24	33	568	4.23%	5.81%
College of Charleston	0	2	25	N/A	8.00%
Comptroller General, Office of the	1	2	2	50.00%	100.00%
Consumer Affairs, Department of	0	1	8	N/A	12.50%
Corrections, Department of	10	20	617	1.62%	3.24%
Cosmetology, State Board of	1	2	3	33.33%	66.67%
Deaf and the Blind, SC School for the	0	1	50	N/A	2.00%
Denmark Technical College	0	1	1	N/A	100.00%
Dentistry, SC State Board of	1	2	3	33.33%	66.67%
Education, State Department of	2	11	222	0.90%	4.95%
Election Commission, State	1	2	4	25.00%	50.00%
Employment Security Commission, SC	2	3	13	15.38%	23.08%
ETV, SC	2	7	48	4.17%	14.58%
Forestry Commission, SC State	2	6	339	0.59%	1.77%
Francis Marion University	0	1	34	N/A	2.94%
Governor, Office of the	0	8	123	N/A	6.50%
Governor's Schools for Science and Mathematics/Arts	0	1	3	N/A	33.33%
Health and Environmental Control, Dept. of	11	41	407	2.70%	10.07%
Health and Human Services Finance Commission, State	2	3	119	1.68%	2.52%
Higher Education, State Commission on	0	1	1	N/A	100.00%

**Appendix G  
Vehicle Use by Agency**

**Table G.1 (continued)**

Agency	Minimum Number of Candidates for More Efficient Use	Maximum Number of Candidates for More Efficient Use	Total Active Vehicles	Percentage of Total Vehicles	
				Using Minimum	Using Maximum
Highways and Public Transportation, SC Department of	137	367	2852	4.80%	12.87%
Home Builders Commission, SC Residential	0	5	7	N/A	71.43%
Housing Finance and Development Authority, SC State	0	8	15	N/A	53.33%
Jobs-Economic Development Authority, SC	0	1	4	N/A	25.00%
John De La Howe School	0	1	15	N/A	6.67%
Land Resources Conservation Commission, State	0	1	15	N/A	6.67%
Lander University	0	4	21	N/A	19.05%
Library, SC State	0	1	7	N/A	14.29%
Medical Examiners, State Board of	0	1	5	N/A	20.00%
Medical University of South Carolina, The	1	2	54	1.85%	3.70%
Mental Health, State Department of	10	22	530	1.89%	4.15%
Mental Retardation, State Department of	1	8	237	0.42%	3.38%
Parks, Recreation and Tourism, Department of	30	37	161	18.63%	22.98%
Patriots Point Development Authority	1	1	1	100.00%	100.00%
Second Injury Fund, SC	0	1	1	N/A	100.00%
Social Services, Department of	1	3	275	0.36%	1.09%
Tax Commission, South Carolina	2	2	14	14.29%	14.29%
Technical and Comprehensive Education, State Board for	2	4	51	3.92%	7.85%
University of South Carolina	28	39	324	8.64%	12.04%
Vocational Rehabilitation Department, SC	1	1	117	0.85%	0.85%
Water Resources Commission, SC	1	2	13	7.69%	15.38%
Wildlife and Marine Resources Department, SC	4	14	399	1.00%	3.51%
Winthrop College	6	8	56	10.71%	14.29%
Workers' Compensation Commission, SC	0	3	9	N/A	33.33%
Workers' Compensation Fund, State	0	2	10	N/A	20.00%
Youth Services, SC Department of	12	21	148	8.11%	14.19%
<b>Total</b>	<b>307</b>	<b>737</b>	<b>8167</b>	<b>3.76%</b>	<b>9.02%</b>

N/A = Not Applicable.

**Appendix G  
Vehicle Use by Agency**

**Table G.2: Agencies With No Candidates for More Efficient Use and Number of Active Vehicles**

Agency	Minimum Number of Candidates for More Efficient Use	Maximum Number of Candidates for More Efficient Use	Total Active Vehicles	Percentage of Total Vehicles	
				Using Minimum	Using Maximum
Adjutant General, Office of the					
Emergency Preparedness Division	0	0	5	N/A	N/A
Aeronautics Commission, SC	0	0	15	N/A	N/A
Alcohol Beverage Control Commission, SC	0	0	55	N/A	N/A
Architectural Examiners, State Board of	0	0	1	N/A	N/A
Archives and History, SC Department of	0	0	7	N/A	N/A
Arts Commission, SC	0	0	4	N/A	N/A
Attorney General, Office of the	0	0	1	N/A	N/A
Budget and Control Board, State					
Local Government, Division of	0	0	1	N/A	N/A
Motor Vehicle Management, Division of	0	0	32	N/A	N/A
Children's Foster Care Review Board System, SC	0	0	3	N/A	N/A
Coastal Council, SC	0	0	11	N/A	N/A
Continuum of Care for Emotionally Disturbed Children	0	0	7	N/A	N/A
Criminal Justice Academy, SC	0	0	10	N/A	N/A
Development Board, State	0	0	12	N/A	N/A
Environmental Certification Board, SC	0	0	1	N/A	N/A
Florence-Darlington Technical College	0	0	4	N/A	N/A
Human Affairs Commission, State	0	0	2	N/A	N/A
Insurance, State Department of	0	0	1	N/A	N/A
Intergovernmental Relations, SC Advisory Commission on	0	0	1	N/A	N/A
Labor, SC Department of	0	0	2	N/A	N/A
Museum Commission, SC	0	0	3	N/A	N/A
Nursing for SC, State Board of	0	0	1	N/A	N/A
Opportunity School, Wil Lou Gray	0	0	13	N/A	N/A
Probation, Parole and Pardon Services Board, SC	0	0	50	N/A	N/A
Public Service Commission, SC	0	0	30	N/A	N/A
Real Estate Commission, SC	0	0	2	N/A	N/A
Sea Grant Consortium, SC	0	0	2	N/A	N/A
State University, SC	0	0	52	N/A	N/A
Teacher Recruitment, SC Center for	0	0	1	N/A	N/A
Technical College of the Lowcountry	0	0	5	N/A	N/A
Veterans Affairs, Department of	0	0	1	N/A	N/A
Williamsburg Technical College	0	0	2	N/A	N/A
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>354</b>	<b>N/A</b>	<b>N/A</b>

N/A = Not Applicable.

# Privately-Owned Vehicle (POV) Reimbursement Savings by Agency

Where savings exceed actual POV expenditures for agencies, this indicates the agency is not using its fleet to capacity. In these cases, savings could be achieved by eliminating underutilized vehicles and/or redistributing vehicles to higher mileage situations (agencies).

Agency	Savings		Total Paid FY 91-92	Paid As a Percent of Savings	
	Minimum	Maximum		Minimum	Maximum
Accountancy, SC Board of	\$0.00	\$0.00	\$5,007.01	N/A	N/A
Adjutant General, Office of the	\$2,424.54	\$2,424.54	\$5,575.45	43.49%	43.49%
Aeronautics Commission, SC	\$0.00	\$0.00	\$2,915.13	N/A	N/A
Aging, SC Commission on	\$0.00	\$1,687.08	\$8,394.71	0.00%	20.10%
Agriculture, SC Department of	\$4,775.74	\$9,747.15	\$180,979.30	2.64%	5.39%
Alcohol and Drug Abuse, SC Commission on	\$0.00	\$845.63	\$13,421.38	0.00%	6.30%
Alcoholic Beverage Control Commission, SC	\$0.00	\$0.00	\$160.72	N/A	N/A
Appellate Defense, SC Office of	\$0.00	\$0.00	\$3,301.36	N/A	N/A
Architectural Examiners, State Board of	\$0.00	\$0.00	\$3,262.48	N/A	N/A
Archives and History, SC Department of	\$0.00	\$0.00	\$2,870.85	N/A	N/A
Arts Commission, SC	\$0.00	\$0.00	\$7,621.20	N/A	N/A
Athletic Commission, State	\$0.00	\$0.00	\$3,800.46	N/A	N/A
Attorney General, Office of the	\$0.00	\$0.00	\$22,410.28	N/A	N/A
Auctioneers Commission, SC	\$0.00	\$0.00	\$2,769.48	N/A	N/A
Barber Examiners, State Board of	\$0.00	\$651.10	\$3,223.43	0.00%	20.20%
Blind, SC Commission for the	\$0.00	\$0.00	\$92,943.78	N/A	N/A
Budget and Control Board, State					
Budget Division	\$2,439.33	\$2,439.33	\$389.27	626.64%	626.64%
Economic Advisors, Board of	\$0.00	\$0.00	\$465.50	N/A	N/A
Executive Director, Office of the	\$0.00	\$1,572.67	\$2,539.12	0.00%	61.94%
Financial Data Systems	\$2,438.20	\$2,438.20	\$63.42	3,844.53%	3,844.53%
Fire Marshall, Division of State	\$0.00	\$4,653.24	\$16,003.77	0.00%	29.08%
Fire Academy	\$0.00	\$2,486.53	*	*	*
General Services, Division of	\$0.00	\$1,613.58	\$47,495.07	0.00%	3.40%
Human Resource Management, Division of	\$0.00	\$1,765.54	\$6,568.58	0.00%	26.88%
Information Resource Management, Division of	\$2,860.93	\$4,420.79	\$6,578.82	43.49%	67.20%
Insurance Services, Division of	\$0.00	\$0.00	\$39,828.01	N/A	N/A
Internal Operations, Division of	\$3,065.10	\$3,065.10	\$541.21	566.34%	566.34%
Local Government, Division of	\$0.00	\$0.00	\$365.12	N/A	N/A
Motor Vehicle Management, Division of	\$0.00	\$0.00	\$2,000.69	N/A	N/A
Research and Statistical Services, Division of	\$2,309.76	\$3,620.80	\$2,874.54	80.35%	125.96%
Retirement Systems, SC	\$3,364.81	\$5,621.05	\$10,091.57	33.34%	55.70%
State Auditor, Office of the	\$0.00	\$0.00	\$30,012.75	N/A	N/A
Children's Foster Care Review Board System, SC	\$0.00	\$0.00	\$16,812.11	N/A	N/A
Chiropractic Examiners, State Board of	\$0.00	\$0.00	\$1,851.30	N/A	N/A
Citadel, The	\$5,784.81	\$5,784.81	\$31,131.00	18.58%	18.58%
Clemson University	\$66,153.15	\$79,802.93	*	*	*
Coastal Council, SC	\$0.00	\$0.00	\$12,261.82	N/A	N/A
College of Charleston	\$0.00	\$3,316.13	*	*	*
Comptroller General, Office of the	\$3,203.67	\$4,519.30	\$3,591.92	89.19%	125.82%

**Appendix H  
Privately-Owned Vehicle (POV) Reimbursement Savings by Agency**

Agency	Savings		Total Paid FY 91-92	Paid As a Percent of Savings	
	Minimum	Maximum		Minimum	Maximum
Confederate Relic Room and Museum	\$0.00	\$0.00	\$377.16	N/A	N/A
Consumer Affairs, Department of	\$0.00	\$614.00	\$1,640.93	0.00%	37.42%
Continuum of Care for Emotionally Disturbed Children	\$0.00	\$0.00	\$100,951.68	N/A	N/A
Contractors' Licensing Board of SC	\$0.00	\$0.00	\$13,214.61	N/A	N/A
Coordinating Council for Economic Development, SC	\$0.00	\$0.00	\$457.73	N/A	N/A
Corrections, Department of	\$30,862.18	\$45,325.46	\$97,195.71	31.75%	46.63%
Cosmetology, State Board of	\$2,824.04	\$3,856.96	\$4,781.78	59.06%	80.66%
Deaf and the Blind, SC School for the	\$0.00	\$1,850.43	\$26,940.05	0.00%	6.87%
Denmark Technical College	\$0.00	\$1,263.27	*	*	*
Dentistry, SC State Board of	\$2,656.82	\$4,543.31	\$5,588.77	47.54%	81.29%
Development Board, State	\$0.00	\$0.00	\$29,789.05	N/A	N/A
Education, State Department of	\$4,132.71	\$14,668.17	\$140,642.77	2.94%	10.43%
Election Commission, State	\$3,862.06	\$5,256.13	\$1,535.39	251.54%	342.33%
Employment Security Commission, SC	\$9,186.42	\$10,890.67	\$475,486.28	1.93%	2.29%
Environmental Certification Board, SC	\$0.00	\$0.00	\$1,344.11	N/A	N/A
Ethics Commission, State	\$0.00	\$0.00	\$3,688.04	N/A	N/A
ETV, SC	\$4,443.25	\$10,738.00	\$23,373.27	19.01%	45.94%
Financial Institutions, Board of	\$0.00	\$0.00	\$83,979.46	N/A	N/A
Foresters, State Board of Registration for	\$0.00	\$0.00	\$652.55	N/A	N/A
Forestry Commission, SC State	\$6,855.32	\$12,102.80	\$230,638.07	2.97%	5.25%
Francis Marion University	\$0.00	\$1,502.36	\$21,176.00	0.00%	7.09%
Funeral Service, SC State Board of	\$0.00	\$0.00	\$10,651.56	N/A	N/A
Geologists, State Board of Registration for	\$0.00	\$0.00	\$1,774.80	N/A	N/A
Governor, Office of the	\$0.00	\$11,362.48	\$29,994.01	0.00%	37.88%
Governor's Schools for Science and Mathematics/Arts	\$0.00	\$1,411.00	*	*	*
Health and Environmental Control, Department of	\$31,081.95	\$72,192.02	\$5,487,916.48	0.56%	1.32%
Health and Human Services Finance Commission, State	\$6,349.72	\$8,251.34	\$180,835.02	3.51%	4.56%
Higher Education Tuition Grants Commission	\$0.00	\$0.00	\$1,279.47	N/A	N/A
Higher Education, State Commission on	\$0.00	\$1,232.98	\$21,297.62	0.00%	5.79%
Highways and Public Transportation, SC Department of	\$366,717.24	\$722,852.79	\$66,859.00	548.49%	1081.16%
Home Builders Commission, SC Residential	\$0.00	\$7,703.32	\$9,137.68	0.00%	84.30%
House of Representatives, The	\$0.00	\$0.00	\$147,102.36	N/A	N/A
Housing Finance and Development Authority, SC State	\$0.00	\$12,494.71	\$5,674.90	0.00%	220.17%
Human Affairs Commission, State	\$0.00	\$0.00	\$3,764.03	N/A	N/A
Insurance, State Department of	\$0.00	\$0.00	\$37,975.79	N/A	N/A
Intergovernmental Relations, SC Advisory Commission on	\$0.00	\$0.00	\$1,000.38	N/A	N/A
Jobs-Economic Development Authority, SC	\$0.00	\$1,927.12	\$2,995.70	0.00%	64.33%
John De La Howe School	\$0.00	\$1,594.97	\$1,239.30	0.00%	128.70%

**Appendix H  
Privately-Owned Vehicle (POV) Reimbursement Savings by Agency**

Agency	Savings		Total Paid FY 91-92	Paid As a Percent of Savings	
	Minimum	Maximum		Minimum	Maximum
Joint Committees of The House of Representatives and The Senate	\$0.00	\$0.00	\$16,212.26	N/A	N/A
Judicial Department	\$0.00	\$0.00	\$226,723.83	N/A	N/A
Labor, SC Department of	\$0.00	\$0.00	\$184,912.61	N/A	N/A
Land Resources Conservation Commission, State	\$0.00	\$953.70	\$28,877.22	0.00%	3.30%
Lander University	\$0.00	\$5,602.25	\$21,978.00	0.00%	25.49%
Law Enforcement Division, SC	\$0.00	\$0.00	\$1,464.60	N/A	N/A
Law Enforcement Training Council	\$0.00	\$0.00	\$4,115.37	N/A	N/A
Legislative Audit Council	\$0.00	\$0.00	\$1,340.67	N/A	N/A
Legislative Council	\$0.00	\$0.00	\$2,608.82	N/A	N/A
Legislative Information Systems	\$0.00	\$0.00	\$156.06	N/A	N/A
Legislative Printing and Information Technology Resources	\$0.00	\$0.00	\$200.43	N/A	N/A
Library, SC State	\$0.00	\$2,074.25	\$2,222.35	0.00%	93.34%
Lieutenant Governor, Office of the	\$0.00	\$0.00	\$274.13	N/A	N/A
Medical Examiners, State Board of	\$0.00	\$878.90	\$4,626.77	0.00%	19.00%
Medical University of South Carolina, The	\$2,971.77	\$4,609.21	*	*	*
Mental Health, State Department of	\$26,439.23	\$48,102.54	\$348,237.21	7.59%	13.81%
Mental Retardation, State Department of	\$3,005.09	\$11,813.86	\$39,673.94	7.57%	29.78%
Migratory Water Fowl Committee, SC	\$0.00	\$0.00	\$791.01	N/A	N/A
Museum Commission, SC	\$0.00	\$0.00	\$3,577.80	N/A	N/A
Nursing for SC, State Board of	\$0.00	\$0.00	\$6,313.38	N/A	N/A
Nursing Home Administrators and Community Residential Care Facility Administrators, State Board of Examiners for	\$0.00	\$0.00	\$3,391.09	N/A	N/A
Occupational Therapy, SC Board of	\$0.00	\$0.00	\$596.45	N/A	N/A
Old Exchange Building Commission	\$0.00	\$0.00	\$1,270.15	N/A	N/A
Opportunity School, Wil Lou Gray	\$0.00	\$0.00	\$3,722.30	N/A	N/A
Opticianry, SC Board of Examiners in	\$0.00	\$0.00	\$1,312.23	N/A	N/A
Optometry, SC Board of Examiners in	\$0.00	\$0.00	\$3,008.49	N/A	N/A
Parks, Recreation and Tourism, Department of	\$68,881.22	\$79,852.81	\$116,981.05	58.88%	68.26%
Patients Compensation Fund	\$0.00	\$0.00	\$1,760.52	N/A	N/A
Patriots Point Development Authority	\$2,705.50	\$2,705.50	\$6,443.15	41.99%	41.99%
Pharmacy, The Board of	\$0.00	\$0.00	\$4,984.26	N/A	N/A
Physical Therapy Examiners, State Board of	\$0.00	\$0.00	\$1,810.35	N/A	N/A
Podiatry Examiners, State Board of	\$0.00	\$0.00	\$833.34	N/A	N/A
Probation, Parole and Pardon Services Board, SC	\$0.00	\$0.00	\$202,876.44	N/A	N/A
Procurement Review Panel	\$0.00	\$0.00	\$2,542.10	N/A	N/A
Professional Counselors, Associate Counselors, and Marital and Family Therapists, State Board of Examiners for	\$0.00	\$0.00	\$1,768.68	N/A	N/A
Prosecution Coordination, Commission on	\$0.00	\$0.00	\$940.90	N/A	N/A
Psychology, State Board of Examiners in	\$0.00	\$0.00	\$1,171.80	N/A	N/A
Public Service Commission, SC	\$0.00	\$0.00	\$18,302.77	N/A	N/A
Real Estate Commission, SC	\$0.00	\$0.00	\$25,738.09	N/A	N/A

**Appendix H  
Privately-Owned Vehicle (POV) Reimbursement Savings by Agency**

Agency	Savings		Total Paid FY 91-92	Paid As a Percent of Savings	
	Minimum	Maximum		Minimum	Maximum
Registered Environmental Sanitarians, SC Board of Examiners for	\$0.00	\$0.00	\$0.00	N/A	N/A
Registration for Professional Engineers and Land Surveyors, SC State Board of	\$0.00	\$0.00	\$2,571.21	N/A	N/A
Reorganization Commission, State	\$0.00	\$0.00	\$4,510.48	N/A	N/A
Savannah Valley Authority of South Carolina	\$0.00	\$0.00	\$4,721.14	N/A	N/A
Sea Grant Consortium, SC	\$0.00	\$0.00	\$2,361.25	N/A	N/A
Second Injury Fund, SC	\$0.00	\$1,507.56	\$20,733.39	0.00%	7.27%
Secretary of State, Office of the	\$0.00	\$0.00	\$54.31	N/A	N/A
Senate, The	\$0.00	\$0.00	\$54,684.98	N/A	N/A
Sentencing Guidelines Commission	\$0.00	\$0.00	\$0.00	N/A	N/A
Social Services, Department of	\$4,000.61	\$6,619.52	\$1,359,296.19	0.29%	0.49%
Social Work Examiners, State Board of	\$0.00	\$0.00	\$2,306.13	N/A	N/A
Speech-Language Pathology and Audiology, State Board of Examiners for	\$0.00	\$0.00	\$440.90	N/A	N/A
State Treasurer, Office of the	\$0.00	\$0.00	\$2,601.98	N/A	N/A
Tax Commission, South Carolina	\$7,531.78	\$7,531.78	\$450,370.54	1.67%	1.67%
Technical and Comprehensive Education, State Board for	\$5,930.08	\$10,348.45	\$116,149.50	5.11%	8.91%
University of South Carolina	\$80,722.45	\$99,981.46	\$632,310.00	12.77%	15.81%
Veterans Affairs, Department of	\$0.00	\$0.00	\$700.48	N/A	N/A
Veterinary Medical Examiners, State Board of	\$0.00	\$0.00	\$3,309.13	N/A	N/A
Vocational and Technical Education, State Council on	\$0.00	\$0.00	\$7,360.54	N/A	N/A
Vocational Rehabilitation Department, SC	\$3,059.12	\$3,059.12	\$397,951.20	0.77%	0.77%
Water Resources Commission, SC	\$2,552.72	\$3,869.95	\$9,004.88	28.35%	42.98%
Wildlife and Marine Resources Department, SC	\$11,958.10	\$23,658.74	\$10,651.89	112.26%	222.11%
Winthrop College	\$17,148.15	\$21,034.68	*	*	*
Women, Commission on	\$0.00	\$0.00	\$1,292.67	N/A	N/A
Workers' Compensation Fund, State	\$0.00	\$4,689.63	\$22,322.53	0.00%	22.52%
Workers' Compensation Commission, SC	\$0.00	\$2,727.91	\$20,824.46	0.00%	12.22%
Youth Services, SC Department of	\$37,299.40	\$52,829.74	\$39,323.79	94.85%	134.35%
<b>TOTAL</b>	<b>\$841,996.97</b>	<b>\$1,490,561.35</b>	<b>\$12,322,688.31</b>	<b>6.83%</b>	<b>12.10%</b>

\*Figures not available.  
N/A = Not Available.

Source: LAC survey responses.

# Commuting Use of Permanently-Assigned Vehicles by Agency<sup>a</sup>

Agency	Number of Vehicles Permanently Assigned	Yearly Mileage		
		Total	Commuting	Commuting as a Percent of Total
Adjutant General, Office of the	1	17,772	2,912	16.39%
Aeronautics Commission, SC	4	28,443	9,670	34.00%
Aging, SC Commission on	3	53,885	0	0.00%
Agriculture, SC Department of	2	31,215	4,500	14.42%
Alcohol and Drug Abuse, SC Commission on	1	15,037	1,353	9.00%
Alcohol Beverage Control Commission, SC	42	953,595	12,270	1.29%
Barber Examiners, State Board of	2	34,712	0	0.00%
Blind, SC Commission for the	4	66,814	10,380	15.54%
Budget and Control Board, State				
Budget Division	1	12,434	5,000	40.21%
Executive Director, Office of the	2	29,433	13,585	46.16%
Financial Data Systems	1	12,438	5,000	40.20%
Fire Marshall, Division of State	16	261,077	0	0.00%
Fire Academy	4	80,415	18,140	22.56%
General Services, Division of	10	191,660	18,890	9.86%
Human Resource Management, Division of	1	10,167	91	0.90%
Information Resource Management, Division of	7	66,585	7,440	11.17%
Insurance Services, Division of	1	7,945	5,500	69.23%
Internal Operations, Division of	1	9,468	4,488	47.40%
Local Government, Division of	1	16,386	6,000	36.62%
Motor Vehicle Management, Division of	1	15,623	0	0.00%
Research and Statistical Services, Division of	1	11,832	4,800	40.57%
Retirement Systems, SC	4	73,964	19,200	25.96%
Citadel, The	1	6,925	0	0.00%
Clemson University	40	506,346	10,270	2.03%
Coastal Council, SC	2	48,275	7,000	14.50%
College of Charleston	1	10,138	0	0.00%
Comptroller General, Office of the	2	27,377	11,100	40.54%
Consumer Affairs, Department of	3	53,529	4,309	8.05%
Corrections, Department of	77	1,183,778	199,424	16.85%
Cosmetology, State Board of	2	29,953	750	2.50%
Criminal Justice Academy, SC	1	22,987	6,624	28.82%
Deaf and the Blind, SC School for the	2	38,647	0	0.00%
Development Board, State	1	28,267	5,000	17.69%
Education, State Department of	65	643,252	0	0.00%
Election Commission, State	1	11,855	10,000	84.35%
Employment Security Commission, SC	3	29,161	20,870	71.57%
Environmental Certification Board, SC	1	23,000	700	3.04%
ETV, SC	17	267,363	2,620	0.98%
Forestry Commission, SC State	138	671,795	3,100	0.46%
Francis Marion University	1	11,108	0	0.00%
Governor, Office of the	6	158,305	0	0.00%
Health and Environmental Control, Department of	59	886,894	28,400	3.20%
Health and Human Services Finance Commission, State	4	44,974	15,076	33.52%

**Appendix I  
Commuting Use of Permanently-Assigned Vehicles by Agency**

Agency	Number of Vehicles Permanently Assigned	Yearly Mileage		
		Total	Commuting	Commuting as a Percent of Total
Higher Education, State Commission on	1	19,844	7,680	38.70%
Highways and Public Transportation, SC Department of	572	7,037,897	413,695	5.88%
Home Builders Commission, SC Residential	7	98,821	5,610	5.68%
Housing Finance and Development Authority, SC State	1	8,803	7,800	88.60%
Human Affairs Commission, State	1	22,274	2,080	9.34%
Jobs-Economic Development Authority, SC	1	13,443	4,000	29.76%
John De La Howe School	1	10,745	0	0.00%
Labor, SC Department of	1	8,751	1,200	13.71%
Land Resources Conservation Commission, State	1	11,260	0	0.00%
Lander University	1	11,906	0	0.00%
Medical Examiners, State Board of	5	108,172	12,071	11.16%
Mental Health, State Department of	22	232,671	197	0.08%
Mental Retardation, State Department of	8	111,319	56,825	51.05%
Parks, Recreation and Tourism, Department of	3	59,624	5,000	8.39%
Patriots Point Development Authority	1	5,718	1,328	23.22%
Probation, Parole and Pardon Services Board, SC	1	22,655	0	0.00%
Public Service Commission, SC	27	561,982	10,227	1.82%
Real Estate Commission, SC	2	42,756	12,710	29.73%
Second Injury Fund, SC	1	15,088	4,000	26.51%
Social Services, Department of	1	15,054	1,600	10.63%
State University, SC	1	9,907	2,080	21.00%
Tax Commission, South Carolina	2	9,064	4,600	50.75%
Technical and Comprehensive Education, State Board for	6	56,434	12,200	21.62%
University of South Carolina	15	80,609	0	0.00%
Wildlife and Marine Resources Department, SC	227	3,851,897	227,607	5.91%
Winthrop College	3	18,294	180	0.98%
Workers' Compensation Commission, SC	4	71,681	2,520	3.52%
Workers' Compensation Fund, State	4	60,089	8,400	13.98%
Youth Services, SC Department of	7	74,583	47,830	64.13%
<b>Total</b>	<b>1,464</b>	<b>19,356,171</b>	<b>1,325,902</b>	<b>6.85%</b>

a Excludes individuals who reported being exempt from reporting commuting for tax purposes.

Source: LAC survey responses.

# Agency Comments

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STATE OF SOUTH CAROLINA  
**State Budget and Control Board**  
DIVISION OF MOTOR VEHICLE MANAGEMENT



CARROLL A. CAMPBELL, JR., CHAIRMAN  
GOVERNOR

GRADY L. PATTERSON, JR.  
STATE TREASURER

EARLE E. MORRIS, JR.  
COMPTROLLER GENERAL

JOHN DRUMMOND  
CHAIRMAN, SENATE FINANCE COMMITTEE

WILLIAM D. BOAN  
CHAIRMAN, WAYS AND MEANS COMMITTEE

LUTHER F. CARTER  
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1022 SENATE STREET  
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ALLAN J. SPENCE  
DIVISION DIRECTOR

March 26, 1993

Mr. George L. Schroeder, Director  
Legislative Audit Council  
400 Gervais Street  
Columbia, S. C. 29201

Dear Mr. Schroeder:

Thank you for allowing me to comment on the Legislative Audit Council's (LAC) Review of State Government Motor Vehicle Resources. We appreciate your efforts to identify areas where improvements can be made. The recommendations and conclusions offered by the LAC are certainly deserving of further study and analysis.

The LAC's Executive Summary states that the Division of Motor Vehicle Management (DMVM) has issued seven *Management Reviews* to the Budget and Control Board (Board) since 1980. By law, DMVM is required to report to the General Assembly and the Board concerning the level of agency compliance with the Motor Vehicle Management Act (MVMA). The LAC failed to make this fact clear in the report's Executive Summary.

Most recommendations in the annual DMVM *Management Review* have been directed to agencies in an effort to achieve a greater degree of compliance. The LAC readily acknowledges that this is where authority over motor vehicle management matters currently exists when it states "Actual control over the fleet rests in the hands of agency heads which has resulted in serious waste of limited state resources." The LAC also states the "tenets of the act (MVMA) cannot be achieved because the act does not provide for central control by the fleet manager."

The LAC Executive Summary attributes many of the problems addressed in your review to oversight weaknesses within the Board. In fact, this finding is not borne out in the body of what is otherwise a creditable report. I submit that the Board is only one entity acting within the overall fleet management system and that it is gratuitous and inaccurate to fault the Board primarily for many of these problems.

Mr. George L. Schroeder  
March 26, 1993  
Page Two

The LAC states in its 1991 Compliance Review of the MVMA that "our report shows that this management system (centralized administratively and decentralized operationally) has contributed to the state's inability to fully comply with the six major objectives of the act." It is a system that deprives the Board of the actual control and authority necessary for effective state fleet management. According to Section 1-11-260, the Board "shall recommend administrative penalties to be used by the agencies." However, the MVMA itself does not allow the Board to impose any administrative penalties against agencies for noncompliance. Consequently, the Board has consciously chosen to work with and encourage state agencies through the Division of Motor Vehicle Management (DMVM). DMVM can suggest and recommend, but its enforcement authority is questionable and limited.

Legislative intent in the past appears to have reinforced the active participation of state agencies in management of the state fleet. I cite a report to the General Assembly by the Motor Vehicle Management Review Committee whereby recommendations were made which were "designed to encourage the director of each state agency to provide input and direction as to how state-owned vehicles would be best utilized in his or her respective agency and to provide maximum cost-effective utilization of state-owned vehicles" (*House Journal*, January 23, 1980).

Although the LAC acknowledges the lack of sufficient control as provided by the MVMA, the Board has made efforts to address many of the problems cited in this and previous reports within the confines of its limited authority. The Board has established administrative penalties to be used by the agencies where the Fleet Safety Program is concerned. Agencies may also take disciplinary action against employees under Human Resource Management guidelines when an employee uses a State vehicle in an unauthorized manner. As of this fiscal year, agency maintenance facilities twice failing to comply with certification standards will be reported to the General Assembly and Board for corrective action.

Also, the Board has complied with more than two-thirds of the recommendations made by the LAC in its last two Compliance Reviews of the MVMA.

The LAC states that it "attempted to assess the feasibility of consolidating maintenance facilities. However, information maintained by facilities and other state entities did not allow for such analysis." Your conclusion appears to indicate that this determination cannot be made until a sufficient database is established for "benchmarking" purposes.

DMVM, under the guidance of the Board, is in the process of developing a statewide equipment management information system (SCEMIS) that will allow the Board to identify where savings could result from eliminating duplication of efforts. Without SCEMIS, neither DMVM nor the Board can adequately identify where vehicle underutilization exists. The Board has been working to develop SCEMIS in order to address many of the issues

Mr. George L. Schroeder  
March 26, 1993  
Page Three

brought forth in your report. In addition, DMVM staff work daily with agencies to encourage the implementation of LAC and DMVM recommendations that are in the best interest of the State.

As stated earlier, your review does contain constructive recommendations. However, it is clearly beyond the Board's authority to direct the transfer of agency assets (vehicles) to DMVM. This is apparently what the LAC recommends when it states that the fleet manager should own all state passenger vehicles and that such vehicles should be leased to agencies at a competitive rate. Also, DMVM would need additional resources if it is expected to assume this expanded role. In the final analysis, it would require legislative action to enact this recommendation and to correct other deficiencies that exist within the current system.

In closing, we are concerned that findings within the body of the LAC review do not support certain suppositions contained within the Executive Summary, namely that the Board is primarily responsible for State fleet management shortcomings. I want to thank your staff for the courteous manner in which they conducted this review. Attached are other specific comments concerning the LAC Review.

Sincerely,



Allan J. Spence  
Director

AJS/hb

Enclosure

## DMVM RESPONSE TO LAC REVIEW OF STATE GOVERNMENT MOTOR VEHICLE RESOURCES

### Alternative Delivery of Vehicle Maintenance Services (Page 4)

**LAC Remark:** The Budget and Control Board has not determined if repair of state vehicles/equipment in state-operated facilities is the most cost-effective means to provide maintenance.

**DMVM Response:** DMVM has attempted several times to have the issue of maintenance facility consolidation and commercial versus in-house maintenance studied. This issue has been a recommendation in the last two Management Reviews, and it has always been our contention that such a study should be conducted by a qualified third party. We anticipated the LAC developing specific findings concerning the feasibility of consolidating facilities and recommending which facilities should be consolidated.

The LAC says that information maintained by the facilities and other state entities did not allow for an adequate analysis of maintenance facility operations (page 27 of your report). It must first be decided **if a facility is needed**, before it can be considered a candidate for privatization. DMVM understood the LAC review of motor vehicle resources would make this determination on all state maintenance facilities.

### Alternative Delivery of Vehicle Maintenance Services (Page 4)

**LAC Remark:** According to the circular A-76 supplement, conversion from government sector to contract services based on economy should be sought in cases where at least 10% of the personnel costs can be saved.

**DMVM Response:** Although personnel costs account for a considerable amount of total maintenance expenses, it should not be the only factor upon which a maintenance contract is awarded. All expenses should be considered before privatization is recommended. For example, the State purchases tires at a lower rate than tire dealers (they receive a handling fee for selling to the state). State government can often obtain supplies at a tremendous discount (as evidenced by your finding on page 9). A contractor probably could not receive or pass on to the state these same discounts. The State may wish to more closely examine those cases where at least 10% of the personnel costs may be saved, but all expenses must be considered before a decision is rendered.

### Commercial Vendor Repair Program (Page 23)

**LAC Remark:** Recommendation 10 - The Division of Motor Vehicle Management should specify a minimum level of participation in program interagency agreements in order to examine the cost-effectiveness of the commercial vendor repair program (CVRP).

**DMVM Response:** The CVRP was developed as a support program, and is not designed to compete with maintenance or repair services provided by State maintenance facilities. Written repair and service agreements are evaluated and established with commercial vendors in each county. One of the attractive

aspects of the CVRP is that it allows vehicles to be repaired or serviced at predetermined prices in outlying areas of the State. It also allows state facilities' management personnel to use these agreements to have work done beyond their capability or capacity. The program was initially established for the DMVM fleet, but later offered as a service to other State agencies. Attempting to establish a minimum level of participation may result in agencies refusing to participate, resulting in the agencies paying higher prices for repairs. However, the General Assembly may wish to mandate CVRP participation for agencies that have vehicles repaired commercially.

#### Retread Tires (Page 25)

**LAC Remark:** California is also testing retreaded passenger tires on state-owned vehicles.

**DMVM Response:** DMVM contacted the State of California concerning their retread experience. The State of California is required to purchase any item produced by prison industries (PI). Bandag Corporation (a large retread rubber and equipment manufacturer) has contacted PI concerning the possibility of retreading passenger tires. The California sampling technique involves six vehicles (4 tires per vehicle), one with new tires, one with new casings (rubber ground off and replaced with Bandag retreads), and four others with Bandag retreaded tires. The four vehicles with sixteen retreaded tires have experienced five failures (tread separation and "blowouts") at mileage between 13,000 and 37,000 miles (31% failures). The State of California has agreed to furnish a copy of its findings to DMVM when its retread test is completed.

#### Inefficient Use of Vehicles (Page 32)

**LAC Remark:** According to DMVM's disposal criteria, a full-size passenger sedan should be driven a minimum of 85,000 miles and be at least five years old before it is considered for disposal.

**DMVM Response:** DMVM's disposal criteria clearly specifies that a vehicle should reach a minimum mileage or (emphasis added) age criterion before being considered for disposal (attachment B). Disposal criteria were developed for disposal purposes and not for the purpose of determining minimum levels of utilization.

#### Inefficient Use of Vehicles (Page 32)

**LAC Remark:** All of the vehicles discussed below were driven less than the minimum yearly mileage needed to meet DMVM's disposal criteria.

**DMVM Response:** As stated above, disposal criteria were developed for disposal purposes and not for the purpose of determining minimum levels of utilization. DMVM does periodically calculate that point at which it becomes more economical to own and operate a vehicle as opposed to paying POV reimbursement (the breakeven point). For FY 90-91 and FY 91-92, the breakeven point was estimated at 14,600 miles. This breakeven point can best be applied to passenger sedans that are primarily used by individuals needing vehicle transportation to conduct official State business.

Many vehicles, especially trucks, are necessary because of the nature of work in which they are involved. Other vehicles used to transport clients are necessary even if they do not meet the breakeven point mileage. This mileage criteria is not one that can be applied to trucks in order to evaluate the need for these vehicles. These vehicles may be essential regardless of mileage because they are often the only type of vehicle that can perform the tasks required.

It is also essential to note that mileage is only one of six criteria that should be used to make a permanent assignment. The LAC does not mention the other five criteria or attempt to use them in determining if a vehicle may be underutilized.

#### Inefficient Use of Vehicles (Page 36)

**LAC Remark:** Recommendation 17 - Agency purchasing and replacement requests should not be approved by the Division of Motor Vehicle Management unless the agency's existing vehicles are meeting utilization and/or mileage criteria set forth by DMVM.

**DMVM Response:** It may be best for DMVM to be in a position to disapprove purchasing or replacement requests if an existing vehicle within the same vehicle class is currently underutilized. Otherwise, DMVM could end up denying the purchase of a truck even though an existing underutilized sedan could not perform the tasks associated with the type of vehicle requested (truck, van, etc.).

#### Inefficient Use of Vehicles (Page 36)

**LAC Remark:** Recommendation 18 - A consolidated database should be used at the Division of Motor Vehicle Management to enable the fleet manager to adequately manage the fleet and ensure the most cost-effective use of state vehicles. The Division of Motor Vehicle Management should work with the Research and Statistical Services division of the Budget and Control Board in automating record-keeping adequate for managing the fleet and the needs of auditors and other analysts.

**DMVM Response:** DMVM cannot begin to identify vehicles that may be underutilized unless we are able to establish a statewide vehicle information system. Without such a system, DMVM cannot accomplish many of the LAC's recommendations. As you are aware, the Division has been working to establish such a statewide system for over a year. However, agency participation and cooperation is essential for such a system to work.

DMVM's and your purpose may be better served by strongly emphasizing the need for agencies to participate in the South Carolina equipment management information system (SCEMIS) once it is developed. The system will be useless if all the appropriate data is not entered.



SOUTH CAROLINA  
DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

P.O. BOX 191  
COLUMBIA, S.C. 29202

DANIEL P. FANNING  
EXECUTIVE DIRECTOR

March 26, 1993

Mr. George L. Schroeder, Director  
Legislative Audit Council  
400 Gervais Street  
Columbia, South Carolina 29201

Dear Mr. Schroeder:

Per your letter of March 22, 1993, attached are comments on your report on motor vehicle resources. Also attached is an additional Affidavit of Confidentiality.

Yours very truly,

*Daniel P. Fanning*  
Daniel P. Fanning  
Executive Director

Attachments

Comments LAC draft (3/22/93)

p. 9 The term "free shipping" is used in a discussion of state-wide parts contracting. This is a very misleading term. The customer always pays these costs. The LAC is suggesting greater compliance with the centralized purchasing requirement is needed, when in fact the requirement is flawed and should be relaxed.

p. 18 The Department does not have excess mechanics. We cannot perform the maintenance workload with the present staffing. DHPT mechanics are generally the equal of those in private business. The fact is that our maintenance workload exceeds our staff level.

p. 40 The Department does not insure inactive vehicles. LAC is wrong to state that we do so.



SOUTH CAROLINA  
DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
P.O. BOX 191  
COLUMBIA, S.C. 29202

DANIEL P. FANNING  
EXECUTIVE DIRECTOR

COLONEL RONALD N. ALFORD  
COMMANDER  
STATE HIGHWAY PATROL

March 26, 1993

TO: Mr. Daniel P. Fanning  
FROM: Colonel R. N. Alford  
SUBJECT: Motor Vehicle Resources Audits - Spare Highway Patrol Vehicles

Reference the Legislative Audit Council report mentioned above, the Highway Patrol responded on March 8, 1993 and respectfully requests that recommendations made in this correspondence be honored as requested. The only additions that are noted from the previous audit report are that our recommendation of a reduction of twenty spare cars statewide has been added as well as an additional section covering SLED vehicle assignments.

Concerning the section on SLED vehicle assignments, I would defer any comments or recommendations to Chief Robert Stewart or his designee as the Highway Patrol has no input into these vehicle assignments.

*R. N. Alford*  
Colonel R. N. Alford  
Director  
Law Enforcement Division

RNA/LWM/mjs



SOUTH CAROLINA  
DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

P.O. BOX 191  
COLUMBIA, S.C. 29202

March 26, 1993

DANIEL P. FANNING  
EXECUTIVE DIRECTOR

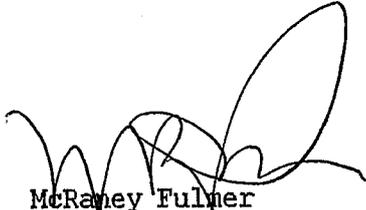
MEMORANDUM FOR INTERIM DIRECTOR OF FINANCE AND ADMINISTRATION

Subject: LAC Final Draft/Motor Vehicle Resources

I have reviewed subject report and it is my considered opinion that the Department is actually understaffed by industry standards. The questionnaire and estimates used in the "SCDHPT Method" as shown on Page 19 of the report were limited in scope and primarily based on Preventative Maintenance (PM) rather than unscheduled maintenance. Further, it did not consider the age of our fleet or other factors that would negatively impact the staffing patterns presently in use in our field shops.

For your further information, I attach comments from Assistant Maintenance Engineer, Mark Hunter, who handles this operation in my office and had input into this study through interviews with the LAC Staff.

Should you need further information concerning this matter, please advise.



McRaney Fulmer  
Director of Maintenance



SOUTH CAROLINA  
DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
P.O. BOX 191  
COLUMBIA, S.C. 29202

DANIEL P. FANNING  
EXECUTIVE DIRECTOR

March 24, 1993

TO: DIRECTOR OF MAINTENANCE  
RE: SCDHPT - MECHANICS STAFFING

There are three (3) major factors that differentiate the Highway Department mechanics' functions from shops in general.

1. The need to perform maintenance in the field. Since the mechanics are responsible to keep road maintenance functions in progress, many times emergency maintenance must be performed twenty-five (25) miles from the shop. It is uneconomical to trailer large equipment, ie cranes, etc., to the central shop location in the county.
2. As noted in the report, the Department is not financially able to replace equipment based on common life cycle reports. This means we must continue to maintain equipment which has passed its economical life. This requires many more maintenance man-hours.
3. Emergency needs such as snow and ice storms, flooding, etc., cannot be anticipated and mechanics are called upon to ready equipment in these events. During these times ordinary maintenance is severely restricted.

Currently we have a need for more mechanics based on our recent experiences with the on going problems as noted above.

A handwritten signature in black ink, appearing to read "Mark Hunter".

Mark Hunter  
Assistant State Maintenance Engineer

fg



Dr. Barbara Stock Nielsen  
State Superintendent of Education

STATE OF SOUTH CAROLINA  
DEPARTMENT OF EDUCATION

M E M O R A N D U M

TO: Mr. George Schroeder, Director  
Legislative Audit Council

FROM: Donald N. Tudor, Senior Executive Assistant  
Division of Support Services 

DATE: March 30, 1993

SUBJECT: Response to Legislative Audit Council Motor  
Vehicle Resources Audit - Logistics of SDE  
Maintenance Result in Unconstructive Mechanic Time

The Department of Education appreciates the opportunity to respond to the Legislative Audit Council's findings regarding school bus maintenance services.

The Department requests that the enclosed response be included in the final Legislative Audit Council report.

DNT/bc  
Enclosure

## State Department Of Education Response

### Logistics Of School Bus Maintenance

The State Department of Education (SDE) constantly evaluates its policies concerning the logistics and method of maintenance delivery to insure that services are provided at the lowest cost and best efficiency.

The SDE maintenance equity allocation model continuously maintains a staffing analysis for all staffing components of school bus maintenance. The model is based on vehicle usage and maintenance travel time.

The Department would like to correct factual errors made by the Legislative Audit Council (LAC).

1. The Department employees 190 mechanics, not the 296 reported in the LAC Report. Therefore, according to the LAC calculations the SDE is 48 mechanics under staffed.
2. The SDE questions LAC's use of the USAF maintenance program as a comparison with the State's school bus maintenance program.
  - a. The fleets are very dissimilar. The school bus is built to last 10 years and 100,000 miles. More than 50% of the State's school buses exceed this age and use. The USAF is not required to maintain a fleet that has 50% of its units operating after their scheduled replacement.
  - b. Service Characteristics differ greatly. The USAF is not required to continuously operate their fleet 200 days a year, transporting children in stop-and-go routes. The SDE operates a fleet of 6,553 vehicles that traveled 71,627,125 miles in FY 1992.
  - c. The service environment is very different. The USAF fleet operates on a military base; the SDE fleet is operated by 91 different school districts throughout South Carolina. The Department must operate a fleet that deals daily with a variety of terrain and road conditions and passenger abuse.
  - d. The level of in-house maintenance services varies greatly. The USAF uses contractors for many of the maintenance functions that the SDE staff completes with in-house mechanic labor. The SDE limits outside contracting to only cost-saving activities.

- The cost structure of the SDE maintenance program justifies little outside contracting.
- e. Vehicles transporting children must be inspected more often than USAF vehicles. The daily, weekly, six-week and annual maintenance inspections, and annual safety check require SDE mechanic man-hours not required of the USAF mechanics.
  3. The Department does not spend 30% of its total mechanic time in route to maintain school buses. A major part of this time is spent responding to road calls. These calls are a direct result of the aging school bus fleet and must be responded to on-site.
  4. The SDE mechanics make single trips daily to school bus consolidated parking areas to conduct regular preventive maintenance. This maintenance service does not consume 30% of the mechanic's time. SDE regulations, now in promulgation, seek to further consolidate school bus parking locations.
  5. As stated by the LAC, the SDE has never conducted a detailed analysis of the time required to have 5,443 bus drivers bring their vehicles to one of 44 maintenance shops at the end of the day. This appears on its face to be a waste of driver time. It is obvious that 1 mechanic visiting 35 buses is exceedingly cheaper than 35 bus drivers visiting 1 mechanic. Having 1 small truck traveling versus 35 large school buses seems easy to justify to the SDE. The LAC fueling suggestion would require 60 buses to drive to the bus shop versus 1 tanker driving to 60 buses. The fuel consumption of 60 school buses versus 1 truck is an operating SDE decision.
  6. The LAC mentions but does not analyze the costs associated with parking facilities for the bus drivers' private cars during the day at each bus shop and the associated liability. The LAC also did not research school bus routing data to determine the actual numbers of bus drivers that drive their buses home at night. The Department only permits a driver to drive a bus home when the trip is less than five (5) miles.
  7. The logistical concerns that the LAC propose to adjust for maintenance and fueling do not cost the State \$2.5 million per year. The LAC has attempted to quote simple mathematics for a very complicated logistical system that deals with

breakdowns, preventive maintenance and mid-day fueling. Breakdowns, preventive maintenance and fueling activities each have different costs and justifications.

8. The SDE is constantly analyzing the logistics of its maintenance services. The SDE analysis continues while daily maintenance and fueling services continue. If directed by the General Assembly the Department will shift its maintenance manpower to conduct a comprehensive maintenance audit.
9. The LAC assumes that nightly maintenance service might reduce the number of road side emergency calls. However, the LAC presents no data. The SDE sees little basis for the LAC assumption. Road side breakdowns are a result of the age of the present fleet and not, as suggested by the LAC, a simple response to flat tires and dead batteries.
10. The LAC report referenced an "Appendix A"; however, the SDE was not allowed to review and comment on this document.
11. The LAC states that if time were eliminated the Department would be over staffed by 52 to 58 mechanics. Time cannot be eliminated. The SDE would have to either pay mechanics or bus drivers. The SDE knows that road-side break downs will continue and increase as the fleet gets older.
12. The LAC report contains a lead paragraph and a column summary that presents numbers referencing "20% unproductive" and "10% inefficient" mechanic labor. The LAC does not support these numbers in the text of the report. These statements seem to imply that the LAC does not define the SDE mechanics response to a school bus broken down on the side of a road as productive or efficient time.

The SDE believes that many of the LAC's findings are particularly inappropriate in light of the level of maintenance service performed by the SDE mechanics, a level well above that found in the transportation industry. This is especially true recognizing the exceptional age and mileage of the State school bus fleet.

## LAC Response to SDE Comments

SDE provided us with the number and job descriptions of the maintenance shop personnel shown below. We analyzed the job descriptions and estimated the full-time equivalent (FTE) number of mechanics by eliminating job activities which do not require a mechanic.

Position Description	SDE Employees	LAC Estimated Mechanic FTE
Trades Helper	19	17.10
Auto Maintenance Tech I	80	76.00
Auto Maintenance Tech II	202	191.90
Auto Maintenance Tech III	13	11.31
Assistant Supervisor of Equipment Services	45	0.00
Trades Supervisor I	43	0.00
Supervisor County School Transportation	42	0.00
<b>Total</b>	<b>444</b>	<b>296.31</b>

As can be seen, the SDE-provided information indicates 295 personnel in the Auto Maintenance Tech positions alone.

We used the United States Air Force (USAF) vehicle equivalent technique (see Appendix A) throughout in our evaluation of the state fleet because this method encompasses all of the maintenance needs of the vehicle types covered, regardless of who provides the service (i.e. contract versus in-house). It therefore provides a reasonable means of estimating the average number of required annual maintenance hours and mechanics.

The SDE transportation office provided us with their own estimates of the average annual maintenance hours per bus, including scheduled and unscheduled maintenance. It is interesting to note that the per bus annual maintenance hours estimate calculated by SDE was within two hours per year of the estimate provided by the USAF technique. We have no information about how the USAF uses their buses, and SDE did not provide any documentation for their statements about the USAF. We believe that the similarity of the estimates provided independently by SDE and the USAF technique supports the reasonableness of using the USAF technique.

While bringing all of the buses to a central point for maintenance and servicing may appear "on its face" to be wasteful, this may not be the case upon further analysis. According to information provided by SDE, and reported in our January 1992 *Cost Savings for State Government: A Special Report*, approximately 8.64 million bus miles in FY 90-91 were incurred between the driver's home or central parking and the first and last route stops ("deadhead miles"). This represented approximately 13% of total bus miles in FY 90-91. We believe this supports our conclusion that the difference in miles between the driver's home and a maintenance shop may not greatly increase the costs of the option suggested.

# SOUTH CAROLINA LAW ENFORCEMENT DIVISION



CARROLL A. CAMPBELL, JR.  
*Governor*

ROBERT M. STEWART  
*Chief*

4400 Broad River Road (J.P. Strom Boulevard) • Mail: P.O. Box 21398  
Columbia, South Carolina 29221-1398 • Phone: 803/737-9000

March 25, 1993

Mr. George L. Schroeder, Director  
Legislative Audit Council  
400 Gervais Street  
Columbia, South Carolina 29201

Dear Mr. Schroeder:

These are surely trying times for the law enforcement community in South Carolina. The most recent statistics rank South Carolina fifth in the nation per capita in violent crime, thirty-ninth in the nation in spending for law enforcement services, and first per capita in police officers killed in the line of duty. The State Law Enforcement Division is assigned the mission of providing technical and manpower assistance to all sheriff's offices and police departments of South Carolina as well as investigative services to state government.

SLED's budget has been cut over two million dollars in the past two years during which time the workload has greatly increased. To accomplish this task, SLED has only 264 agents, 71 of which work in the highly specialized area of Forensic Sciences. All SLED agents, no matter what their primary assignment, are trained and equipped the same so as to maximize the number available for emergency response. Due to the shortage of manpower, many agents have secondary responsibilities that are extremely important.

SLED agents, all of whom are equipped with statewide pagers, are required by policy to have their vehicles and equipment with them at all times, except while on leave, to assure immediate and timely response to emergencies. They are also required to take appropriate action at the scene of any crime they encounter at any time, any place, which occurs on a regular basis.

The Legislative Audit Council report questions the commuting use of state vehicles. For the various reasons listed above,

Mr. George L. Schroeder  
March 25, 1993  
Page 2

primarily immediate response twenty-four hours a day, SLED agents are required to have their vehicles and issued equipment with them. It is certain that no one wants to wait for an agent to drive a personal car to Headquarters to get his SLED vehicle and then respond with blue light and siren to a murder or other serious crime. Local law enforcement departments call SLED for the most serious crimes and want help as soon as possible. Even the federal government recognizes this procedure. The Internal Revenue Service exempts law enforcement officers from taxes on the use of issued vehicles because police are considered on call at all times and expected to take action whenever necessary. FBI, DEA, ATF, and Customs agents in this area drive their assigned vehicles home. The value of lives and property saved by immediate and rapid response outweigh the associated cost.

The report questions the issuance of cars to SLED agents assigned to the forensics sciences department. Again, all of the reasoning stated above applies to these agents as well. Additionally, at least 45 forensic agents must be ready to respond to crime scenes around the clock, twenty-four hours a day at a moment's notice. Several have secondary responsibilities, such as being members of the SWAT Team. All must be ready to travel to the Circuit Courts throughout the state to testify as expert witnesses concerning the various analyses they have performed and respond from wherever they are to the laboratory to perform emergency analyses at night and on the weekend. Many times they are notified at home late in the evening or early in the morning to be in a certain court somewhere in the state since trial schedules change erratically due to guilty pleas and for other reasons.

In disaster, crowd control and emergency situations, with Hurricane Hugo being the extreme, all agents including those assigned to Forensics are placed throughout the state to supplement local authorities. SLED must be prepared for the worst situations. Even under normal operations, if this agency were to pool cars for use by agents in the Forensics Department, it is doubtful there would be much savings because of the number of vehicles required and there would be a reduction in the level of services rendered. On busy days when most of the courts in the state are in session and a number of crime scenes are being processed at the same time, a large number of agents would be driving state cars anyway.

The LAC report states that 84 agents assigned to forensics have issued vehicles. This simply is not true since there are only 71 agents working in that important department. This calls in to question the accuracy of the report and is even further developed

Mr. George L. Schroeder  
March 25, 1993  
Page 3

when one considers the section listed as questionable assignments, which is equally astounding. For example, an issue is made as to cars assigned to four (4) pilots. Our helicopter, which responds to numerous emergency calls, is located at the Columbia Airport. Two pilots are required for each flight. They must make an emergency response to the airport. Blue lights and sirens are illegal on personally owned cars. If pilots were required to stay at the airport continuously, the overtime expense would be tremendous. There is no overtime pay if the pilot is on call on his beeper and ready to respond and that is the procedure used. The Wildlife helicopter is used as our backup and if a second call is received, the other pilots must be ready to respond. The training supervisor mentioned in the report is in charge of SLED's SWAT Team; therefore, he carries special equipment in his car and must be prepared to respond to emergencies anywhere in the state at any time. The Central Records supervisor serves as backup for the bloodhound tracking team. The Public Information Supervisor is called to locations all over the state day and night to assist sheriffs and chiefs as well as SLED with media concerns at serious crimes and other events. SLED must make the most of its limited manpower and often that means agents having important secondary roles.

It may be asked why SLED did not submit a response to the preliminary LAC report. The correspondence file between this agency and the LAC compiled during this lengthy review is several inches thick. A meeting was also conducted at which time all of the concerns outlined herein were discussed. This obviously had no effect on the report so there seems to be no reason to waste anymore time and effort on a preliminary response but rather to reserve our comments for the final report.

The crime problem is immense. Law enforcement is outnumbered, undermanned and tasked with an awesome responsibility that involves human life. We are trying to make the most of what we have. I care deeply for these unique people who are known as SLED agents. They are a part of our state's first line of defense. They lay their lives on the line at a moment's notice whenever and wherever it is required. I desperately want them to be properly equipped in an effort to make our state a safer place for all to live. It is difficult for those outside of law enforcement to understand our needs and our dedication to duty. It is hopeful that these

Mr. George L. Schroeder  
March 25, 1993  
Page 4

comments will increase that understanding and eliminate some of the concerns outlined in this report.

Yours very truly,

A handwritten signature in black ink, appearing to read "Robert M. Stewart". The signature is fluid and cursive, with a long horizontal stroke at the end.

Robert M. Stewart, Chief  
South Carolina Law Enforcement Division

RMS:gdk

## LAC Response to SLED Comments

On February 23, 1993, we provided SLED with a preliminary draft of our report so that any errors or misunderstandings could be resolved. We requested preliminary comments from SLED by March 9, 1993. SLED chose not to respond, and instead to withhold comments until the final draft. SLED did not discuss exceptions with the Audit Council reference on page 44 of the report which states, "Eighty-four forensic services division employees at SLED have state vehicles assigned to them." The 84 forensic services employees, were identified to us by SLED in a letter dated May 11, 1992. We verified that these assignments are within the forensic services division by reference to the SLED annual report for FY 90-91. Below is a summary, by department within the forensic services division of the 84 employees.

Department	Employees
Arson Control Team	16
Arson Forensics/Crime Scene	1
Behavioral Sciences/Crime Scene	1
DNA/Crime Scene	5
Drug ID Support	1
Drug ID/Crime Scene	9
Evidence Log in	1
Firearms/Crime Scene	4
Forensic Art/Crime Scene	2
Forensic Administration/Crime Scene	1
Forensics Supervisor	2
Implied Consent/Crime Scene	2
Latent Prints Supervisor	1
Latent Prints/Crime Scene	7
Photography/Crime Scene	1
Polygraph/Crime Scene	4
Polygraph Supervisor	1
Questioned Documents/Crime Scene	3
Serology Supervisor	1
Serology/Crime Scene	7
Toxicology	1
Toxicology Supervisor/Crime Scene	1
Toxicology/Crime Scene	7
Trace Evidence Supervisor	1
Trace Evidence/Crime Scene	4
<b>Total</b>	<b>84</b>

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This report was published for a total cost of \$1,499.00; 450 bound copies were printed at a cost of \$3.33 per unit.

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