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PERFORMANCE AUDIT

DEPARTMENT OF TRANSPORTATION

PURSUANT TO ACT 1981-35

June 1996

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Summary of Findings and Recommendations

Act 1981-35, 75 Pa. C.S.A. §9701, requires the Legislative Budget and Finance Committee to conduct a performance audit of the Pennsylvania Department of Transportation every six years. Below is a summary of the report's findings and principal recommendations and a brief description of the performance measures section of the report.

Findings and Recommendations

◇ Highway Administration

◆ **A1. Maintenance Spending.** Maintenance spending for PennDOT-maintained highways increased 22 percent from FFY 1989 to FFY 1994 (\$667 million to \$814 million). When adjusted for inflation, however, the increase is only 2.0 percent. Over this same period, the percentage of roads rated as poor or very poor improved modestly, declining from 54.8 to 52.1 percent. PennDOT's maintenance expenditures per lane mile were fifth highest among a 13-state peer group; capital expenditures per lane mile were about average. The rideability of PA's interstates and principal arterial roadways as measured by the International Roughness Index was slightly below average.

◆ **A2. The Maintenance Allocation Formula.** The single most important factor in the statutory formula used to allocate county maintenance monies is the "base allocation," which is the amount the county received for maintenance in either FY 1978-79 or FY 1979-80. As a result, the amount a maintenance district receives in maintenance monies has very little to do with the conditions of its roads. We found that counties with the best roads, on average, receive far more in maintenance monies, both on a per lane mile basis and as a percentage of their actual highway needs, than counties with the worst roads. **Recommendation:** The General Assembly amend the maintenance allocation formula to better reflect actual county maintenance needs.

◆ **A3. "Make/Buy" Decisions.** The Department spent \$637 million on routine maintenance last year, 23 percent through contracts with private sector firms. PennDOT does not, however, have a standard methodology to determine whether to perform routine maintenance work in-house or by contract. Decisions to contract out appear to be driven largely by personnel and equipment constraints at PennDOT's county maintenance offices rather than by an analysis of the various alternative approaches. **Recommendation:** The Department develop and implement a standard methodology for making "make/buy" decisions.

◆ **A4. Highway Consulting Costs.** Highway consulting contract costs have been escalating in recent years, rising from 6.5 percent of construction and betterment costs in FY 1989-90 to 10.2 percent in FY 1994-95. On major projects, environmental and cultural impact statements alone can cost as much as \$7 million and take five to ten years to complete. Because of the long lead times required for these studies, they are often begun before project construction funds are secured. As a result, at least 12 of 49 environmental studies for projects currently on file at the Department are now on hold due to lack of funds to begin construction.

◆ **A5. County Manager Autonomy.** County maintenance managers have limited input into the annual work plans and the budgetary, personnel, and equipment decisions affecting their counties. These decisions are largely made at the central office and engineering district level. In particular, the overall surface mileage improvement goals established by the central office can result in counties directing scarce resources to lower priority activities. The Department reports that it will discontinue setting such specific mileage requirements. **Recommendations:** The Department should consider granting county managers more autonomy by (1) directly involving county managers in formulating annual work plans; (2) allowing managers authority to move budgeted monies between major expenditure objects (within certain limits); and (3) granting county managers limited authority to hire and fire temporary personnel.

◆ **A6. County Support for Central Office and Engineering District Costs.** In FY 1994-95, 13.8 percent of all state and federal maintenance monies available to the counties was used to support the central and engineering district offices for services provided to the counties. Some of these charges, such as for truck weight and safety enforcement teams and truck highway occupancy permits, appear only indirectly related to county maintenance functions. **Recommendation:** The Department should review the central and engineering district office functions being charged to county maintenance districts and remove costs that are not clearly and directly related to maintenance programs and activities.

◆ **A7. Narrow Spans of Control.** Our review of three of the Department's 11 engineering districts found 18 instances of 1:1 reporting relationships and 11 instances of 1:2 reporting relationships between a supervisor and a professional employee. In the five Highway Administration central office bureaus we found 29 such instances of a 1:1 reporting relationship and 21 instances of a 1:2 reporting relationship. Such narrow spans of control can result in inefficiencies and redundant layers of management. We estimated that the Highway Administration deputation could save \$5 million annually if all such 1:1 reporting relationships were eliminated. **Recommendation:** The Department review its organizational structure with the goal of eliminating all 1:1 and 1:2 reporting relationships.

◆ **A8. 1996 Winter Weather and Pothole Costs.** The Department expended over \$162 million for winter services and pothole repairs in 1996; winter-related damages are estimated at an additional \$145 million. PennDOT responded to the emergency conditions by using new winter services technology; redeploying work crews from less affected counties; and instituting emergency contracting procedures for initial repairs to damaged roads and bridges. PennDOT has imposed a hiring freeze and delayed spring maintenance to redirect resources to meet these needs. Despite the bad winter weather conditions, the number of complaints per week being made to the Department's pothole hotline is at about the same level as in 1995.

◆ **A9. Equipment Needs.** On average, 25 percent of PennDOT's major categories of equipment (e.g., dump trucks, loaders, backhoes, excavators, and graders) are beyond their expected life. To help address these needs, PennDOT has increased its equipment budget from \$18 million in FY 1994-95 to \$24 million in FY 1995-96. The Department uses a preventive maintenance program and shares equipment between counties to stretch its equipment budget. **Recommendation:** When long-term borrowing of equipment occurs between counties, the borrowing county should reimburse the original purchasing county for the depreciation.

◆ **A10. Condition of County Maintenance Facilities.** Many county maintenance facilities need to be renovated or replaced. Renovations are probably not economically feasible or desirable at some of these facilities; they should be consolidated or replaced. The Department is in the process of developing an options plan to correct facility deficiencies. **Recommendation:** The Department should make its options plan, including cost estimates for correcting the most serious deficiencies, available to the relevant House and Senate committees.

◆ **A11. Work Zone Safety/Motorist Inconvenience.** Between 1991 and 1995, work zone accidents increased 82 percent. The Department has placed increased attention on work zone safety by attempting to reduce lane closings and sign clutter. However, due in part to concerns over liability, speed reduction and construction warning signs sometimes remain in place even though construction is not in process. Inappropriate signs can result in motorist inconvenience and can cause motorists to question the validity of other construction warning signs. **Recommendations:** As part of its work zone quality assurance reviews, the Department should review work zones for these and other factors that can affect safety or motorist convenience. The Department should also review the potential liability of requiring contractors to remove or cover over inappropriate work zone signs.

◆ **A12. Truck Weight Waivers.** Trucks in excess of 80,000 pounds must obtain weight waiver permits. These permits cost \$15 plus 3¢ per ton mile traveled. The 3¢ per ton-mile fee has not changed since 1975. Additionally, only about 25 percent of the fines assessed against truckers who operate overweight trucks are

actually collected. **Recommendations:** The Department should develop an estimate of the weight waiver fee that would be necessary to cover the damage caused by overweight trucks; the General Assembly should consider increasing the fee to cover at least a significant portion of the estimated damage. Also, PennDOT should work with the Administrative Office of PA Courts, the Attorney General's Office, and the Special Court Judges Association to ensure that a higher percentage of fines imposed are actually collected. Consideration should also be given to the feasibility of imposing the fines on the companies loading the trucks rather than on the truckers.

◆ **A13. Metric Conversion.** PennDOT will spend about \$16 million to comply with federal metric conversion requirements. Congress has rescinded the requirement that highway signs be expressed in metric units, which would have cost an additional \$15 million.

◇ **Safety Administration**

◆ **B1. Traffic Fatalities.** Over the last five years, Pennsylvania has ranked at or near the middle among the states in fatality rates. Safer cars and initiatives taken by PennDOT and others have contributed to the reductions. However, accident rates for teenage drivers are more than four times the rate for middle-aged drivers. **Recommendation:** To reduce accidents among young drivers and to avoid losing federal grants for sobriety checkpoints and future federal highway funding, the General Assembly should establish a .02 percent blood alcohol level limit for drivers under 21 years of age.

◆ **B2. Decentralization/Privatization of Services.** As required by Act 1992-166, PennDOT has decentralized and privatized many of its licensing, registration, and driver exam services. As part of these efforts, the Department realigned several of its photo license and driver examination centers, causing temporary disruptions. Also, driver exam wait times may exceed PennDOT's two-week goal during the summer and travel to driver licensing centers can be 45 minutes or more in some rural areas. **Recommendation:** The Department should develop goals for acceptable maximum driving times and/or mileage distances to its various driver license centers, and areas outside these zones should be targeted for PennMobile services.

◆ **B3. Telephone Information Center.** The Department's Telephone Information Center has experienced busyouts for its 800 customer service lines ranging from 6.6 million to 7.3 million times annually, with callers often having to call 75 or more times to speak to an operator. To improve service, PennDOT is privatizing this service. **Recommendation:** The Department should require its vendor to report on the problems that are generating calls, along with recommendations for improvements.

◆ **B4. Vehicle Registration Fees.** At \$24 a year, the cost to register a passenger vehicle in Pennsylvania is among the nation's lowest; the cost to register trucks is also low compared to other states. If the annual registration fee for passenger vehicles and two categories of light trucks were raised from \$24, \$39, and \$54 to the inflation-adjusted rates of \$66, \$107, and \$149, it would generate an additional \$372 million annually. **Recommendation:** The General Assembly should consider raising the annual vehicle registration fees. Consideration should be given to varying these fees depending on the vehicle's value.

◆ **B5. Truck Safety Enforcement.** PennDOT has agreed to participate in an interstate Commercial Vehicle Safety Alliance to coordinate safety inspections (conducted by PennDOT, State Police, and PUC) among states, but PA inspectors often do not issue CVSA decals. Two new truck registration programs (IFTA and IRP) appear to have improved efficiency in collecting motor carrier fuel taxes and registration fees. **Recommendations:** The Department should develop a written policy to determine when to issue and honor CVSA stickers. Also, PennDOT should report the number of MCSAP inspections being conducted by all state agencies in the Governor's Executive Budget.

◆ **B6. Uninsured Vehicles.** A new computer system designed to identify uninsured vehicles is largely ineffective because insurance companies do not report needed information on new policies written. Also, the Department has stopped auditing vehicle registration renewals for compliance with the Motor Vehicle Financial Responsibility Law and instead is focusing on potentially fraudulent vehicle titles submitted by messenger services and tag agents. **Recommendations:** The General Assembly should consider: (1) requiring insurers to report information on new policies written, (2) authorizing PennDOT to contract with private parties to recover the tags of uninsured vehicles, (3) providing the state and local police with authority to impound vehicles whose registration has been suspended for lack of insurance, and (4) increasing the fine for noncompliance.

◆ **B7. Vehicle Emissions.** PennDOT has recently developed a new, decentralized vehicle emissions plan which the General Assembly has accepted. Federal approval is expected in late summer 1996.

◇ **Local and Area Transportation**

◆ **C1. Decline in Public Transit Ridership.** Public transit ridership in Pennsylvania decreased by 8 percent from FY 1990-91 to FY 1994-95. Although combined federal and state grants to mass transit in Pennsylvania grew from \$510 million to \$725 million during this period, federal funding cuts are now occurring. Public transit operators are adjusting by cutting services and/or raising fares. This may lead to further ridership declines.

◆ **C2. Road Turnback Program.** Efforts to transfer 12,000 miles of functionally local roads back to local governments have stalled, in part because the annual \$2,500 per linear mile grant municipalities receive for the transfer falls far short of actual maintenance costs. **Recommendation:** The General Assembly should consider increasing the amount of the Oil Company Franchise Tax dedicated to the turnback program.

◇ **Aviation and Rail Freight**

◆ **D1. Rail Freight Grants.** Until recently, rail freight grants lacked coordination with other transportation and regional economic development initiatives. Such planning has recently improved as a result of federal ISTEA legislation that requires greater involvement by local transportation planning organizations. The Department has also improved its criteria for awarding these grants.

◆ **D2. Capital City Airport.** If viewed as a stand-alone operation, PennDOT's Capital City airport loses about \$500,000 annually. However, Capital City serves as a reliever airport for the profitable Harrisburg International Airport. Yet, unlike the arrangements between Pittsburgh International Airport and its reliever, HIA does not provide a subsidy to offset the costs of Capital City. Such a subsidy is needed to fund repairs and renovations at Capital City. **Recommendation:** If PennDOT has not divested itself of Capital City by 1998 (the date the current HIA agreement expires), any new agreement should allow a portion of HIA landing fee revenues to be used at Capital City.

◆ **D3. Aviation Advisory Committee.** The Aviation Code does not provide for an advisory body. Instead, PennDOT uses an informal group; statutory authority for such a group would add legitimacy and continuity in partnering with the aviation industry. **Recommendation:** The General Assembly should consider amending the Aviation Code to provide for an aviation advisory body to include aviation experts; representatives of airlines, airport owners, and managers; representatives of local and regional planning groups; legislators; and the general public.

◇ **Executive Office, Administration, Planning**

◆ **E1. Motor License Fund.** Motor License Fund revenue growth is projected to be flat for the foreseeable future. If Pennsylvania is to do much more than maintain the existing transportation infrastructure, new sources of revenue will be needed. Proposals include increasing the gas tax; increasing vehicle registration, overweight truck permit, and other fees; issuing bonds; tolling existing interstates and/or constructing new private toll roads; and promoting public/private partnerships.

◆ **E2. Purchasing Procedures.** PennDOT's ability to purchase materials and routine services is hampered by complex purchasing procedures that require multiple layers of review and approval, resulting in delays and added costs. These procedures apply to all executive branch agencies, but PennDOT is one of the most heavily affected departments because of its large volume of purchases. **Recommendation:** PennDOT, together with the Department of General Services and the Office of Budget, should continue efforts to reduce the time and cost to process material and service purchases; such solutions should be viewed within the context of all of state government so that the savings PennDOT may realize are not offset by additional costs to other agencies.

◆ **E3. Performance Measures.** PennDOT has been a national leader in developing quantitative performance measures. Many of these measures, however, were developed in the early 1980s, and most measure inputs or outputs rather than efficiency and results. The Department is developing new performance measurement systems that place greater emphasis on efficiency and outcomes. **Recommendation:** The Department should continue its efforts to improve its performance measurement system by streamlining the number of measures; focusing on outcomes and efficiency; and better integrating the measures with management decision-making processes.

◆ **E4. Transportation Project Planning.** Federal ISTEA legislation gives greater transportation planning and decision-making authority to state and local governments. Congress, however, often earmarks federal funds for specific projects. For example, 84 percent of the federal money available for new construction over the next four years was earmarked by Congress for specific projects, most of which are in central Pennsylvania. Rather than risk losing these funds, PennDOT and the local planning organizations accept the earmarked projects and support them with state matching funds, even though more important projects may then go unfunded.

◆ **E5. Compliance With ISTEA Requirements.** Federal ISTEA legislation imposed 40 requirements on state transportation departments; PennDOT has complied with virtually all of them. ISTEA also gave states flexibility in how they use federal funds to meet their transportation needs, but Pennsylvania, like most states, has "flexed" few funds from highways to mass transit or other nontraditional modes.

◆ **E6. Intelligent Transportation Systems.** PennDOT has developed, and is beginning to implement components of, an Intelligent Transportation Systems (ITS) Strategic Plan. However, the plan does not yet have milestones or time frames for assessing progress, nor does it identify potential funding sources. The plan also does not contain guidance or otherwise make provisions for cost-benefit analyses to evaluate the merits of individual ITS projects or to facilitate comparisons between projects. Such analysis will be crucial to determine the feasibility of these projects. **Recommendation:** The Department, in updates to the ITS Plan,

should provide guidance on how to analyze the costs and benefits of proposed ITS projects.

◆ **E7. June 1994 Fire.** The Department had originally planned to vacate the fire-damaged Transportation and Safety Building by the end of March 1995. Delays in identifying appropriate facilities, obtaining leases, and accomplishing renovations at leased sites have contributed to slowing the relocation process. Approximately \$15 million is being spent on fire-related moving expenses this fiscal year, with an additional \$19 million budgeted for FY 1996-97. In January 1996, the Administration announced plans to demolish and rebuild the T&S Building at an estimated cost of \$218 million. Current plans are to relocate all workers by September 1996.

Performance Measures

The report also includes 50 quantitative measures of the Department's performance. The measures include input, output, efficiency, and outcome indicators as well as explanatory information on factors that are outside the Department's control but that can affect its performance. Measures include, for example, pavement roughness; dollar amount of highway needs; percent of construction projects completed on time; fatalities and injuries per 100 million vehicle miles; number and percent of telephone center busyouts; employee error rates; debt service as a percentage of Motor License Fund revenue; and average annual sick leave usage.

I. Introduction

Act 1981-35, 75 Pa.C.S.A. §9701, requires the Legislative Budget and Finance Committee to conduct a performance audit of the Pennsylvania Department of Transportation every six years. This is the third such audit.

Audit Objectives

1. To determine the status of recommendations made in prior performance audit reports.
2. To develop a quantitative set of input, output, efficiency, and outcome measures to assess the Department's performance in major activity areas and to provide relevant explanatory data.
3. To assess the Department's compliance with the federal Intermodal Surface Transportation Efficiency Act of 1990 and Act 1992-166 pertaining to decentralization and privatization of driver licensing, driver examination, and vehicle registration and titling services.
4. To identify Department functions and activities that could be performed in a more efficient, economical, or effective manner.
5. To address specific legislative concerns in areas pertinent to the Department's operations.

Scope and Methodology

The audit is intended to cover the five-year period from July 1, 1990, through June 30, 1995, with greater emphasis being placed on more recent years. Information is also provided on Department activities in FY 1995-96, although year-end financial information and program statistics were not yet available as of the end of the audit.

To determine the status of recommendations made in prior performance audit reports, we itemized the recommendations made in our June 1990 performance audit report and three other recent LB&FC reports pertaining to aspects of the Department of Transportation (emissions inspections, potholes, and the June 1994 fire in the Transportation and Safety Building). We then inquired as to the status of these recommendations and, depending on the Department's response, conducted follow-up activities as we thought necessary. This report contains information on the status of several, but not all of these prior recommendations. Additional

information on the status of recommendations not addressed in this report is available by contacting the LB&FC offices.

To develop quantitative performance measures, we reviewed work done by the Governmental Accounting Standards Board's Service Efforts and Accomplishments task forces; the American Association of State Highway and Transportation Officials; the Federal Highway Administration; the Federal Transit Administration; the Center for Interdisciplinary Transportation Studies at the University of North Carolina at Charlotte; states such as Texas, Arizona, and Minnesota that have developed performance measurement and budgeting systems; and PennDOT's own internal performance measurement systems. We reviewed PennDOT's performance measurement information for internal consistency and obvious discrepancies. We did not, however, audit PennDOT's internal controls over the management information systems used to collect and compile the performance measurement information presented herein, and therefore express no opinion on the reliability of these systems.

The states selected as peer states for this audit are New York, Ohio, Michigan, Illinois, Minnesota, Missouri, Virginia, and North Carolina. These states were selected based on 13 factors affecting state transportation systems, including population, road mileage under state jurisdiction, climate, and terrain. The contiguous states of New Jersey, Maryland, Delaware, and West Virginia were also included as comparison states for some measures.

To assess compliance with the federal Intermodal Surface Transportation Efficiency Act of 1990, we reviewed Department files and records and interviewed U.S. Department of Transportation, PennDOT, and Metropolitan Planning Organization staff responsible for implementing the act. To assess compliance with Act 1992-166, we conducted interviews, reviewed file documents, and made field visits to newly consolidated or decentralized facilities.

To identify Department functions and activities that could be performed in a more efficient, economical, or effective manner, we sent questionnaires to the members of the State Transportation Commission and the State Transportation Advisory Committee, to all PennDOT district engineers and county maintenance managers, and to a stratified random sample of 690 other Department employees. Summaries of the responses we received from district engineers and county maintenance managers are in Appendix A. Responses from other questionnaire recipients were taken into consideration in our analyses and are included in the findings discussions where appropriate. We also interviewed both the past and present Secretaries and deputy secretaries, the current bureau directors, and held follow-up meetings with various other PennDOT personnel. We conducted field visits to four engineering districts, nine maintenance district offices, and the Capital City Airport. We participated in truck inspections on three different days. We reviewed internal PennDOT management studies; studies done by external organizations,

including AASHTO, the Pennsylvania IMPACCT Commission, and transportation institutes at various universities; and daily press clippings pertaining to both PennDOT and transportation generally. We also contacted various organizations, associations, union groups, and individuals interested in and affected by the Department's operations.

To identify legislative concerns, we sent letters to each member of the House and Senate Transportation Committees informing them of the audit and attended both the 1995 and 1996 PennDOT Appropriations Committee hearings of both houses. We also met with several legislators who expressed an interest in the audit and otherwise communicated with legislative staff on pertinent topics. We also attended hearings of the State Transportation Commission at several locations throughout Pennsylvania as well as meetings of the State Transportation Advisory Committee.

Report Structure

This report, like the Department itself, is structured by depute office: Highway Administration, Safety Administration, Local and Area Transportation, and Aviation (which includes rail freight). The Administration and Planning deputes are combined with the Executive Office.¹ Chapter II contains findings and recommendations related to each depute.

The performance measures found in Chapter III were developed by LB&FC staff with input from Department staff. The term "performance measure" is used broadly to include:

- **Input indicators** that describe the resources (money, labor, materials, equipment, supplies) needed to provide a particular product or service.
- **Output indicators** that describe the products or services provided by a program and focus on the level of activity.
- **Efficiency indicators** that describe the cost (whether in dollars, elapsed time, or employee hours) per unit of output or outcome.
- **Outcome indicators** that attempt to describe the results of a program or service, ideally against the program's objectives and goals.

¹Appendix B provides PennDOT personnel complement level by depute, as of June 30, 1990, and June 30, 1995.

- **Explanatory data** that address factors affecting the Department but not under its direct control, such as bond indebtedness, Federal Highway Trust Fund apportionments, and mass transit ridership.

In developing these measures, we attempted to focus on measures that the Department could affect directly through its management policies and practices.

Acknowledgments

We thank the management and staff of the Pennsylvania Department of Transportation for the excellent cooperation provided throughout the audit. In particular, we thank the Secretary of Transportation, Bradley Mallory; former Secretary Howard Yerusolim; and Deputy Secretaries Larry King, Richard Peltz, Michael Ryan, Elizabeth Sarge-Voras, Betty Serian, and Robert Wonderling. We also would like to acknowledge the assistance provided by Richard Harris, Director of the Operations Review Group; David Margolis, Director of the Bureau of Fiscal Management; and Larry White, Director of Driver and Vehicle Program Services.

Important Note

This report was developed by Legislative Budget and Finance Committee staff. The release of this report should not be construed as indicating that the Committee's members necessarily concur with all the report's findings and recommendations.

Any questions or comments regarding the contents of this report should be directed to Philip R. Durgin, Executive Director, Legislative Budget and Finance Committee, P.O. Box 8737, Harrisburg, Pennsylvania 17105-8737.

II. Findings and Recommendations

FINDING A1

A Modest Increase in Maintenance Spending Has Yielded Some Improvement in Road Conditions but Over Half the Roads Remain in Poor or Very Poor Condition

Summary: Maintenance spending for PennDOT-maintained highways increased from \$667 million in FFY 1989 to \$814 million in FFY 1994, a 22 percent increase. However, when adjusted for the effects of inflation, the increase is only 2.0 percent. Over this same time period, the percentage of Pennsylvania roads rated as poor or very poor using the International Roughness Index improved modestly, declining from 54.8 to 52.1 percent.

PennDOT's 1994 maintenance expenditures per lane mile were greater than all but 4 of the 13 peer states we reviewed (New Jersey, Maryland, New York, and Delaware). Pennsylvania's capital expenditures per lane mile were about average. Compared to other states, the rideability of Pennsylvania's interstates and principal arterial roadways was slightly below average, ranking no better than fifth and no worse than eleventh within the 13-state peer group for each of four different classes of roads.

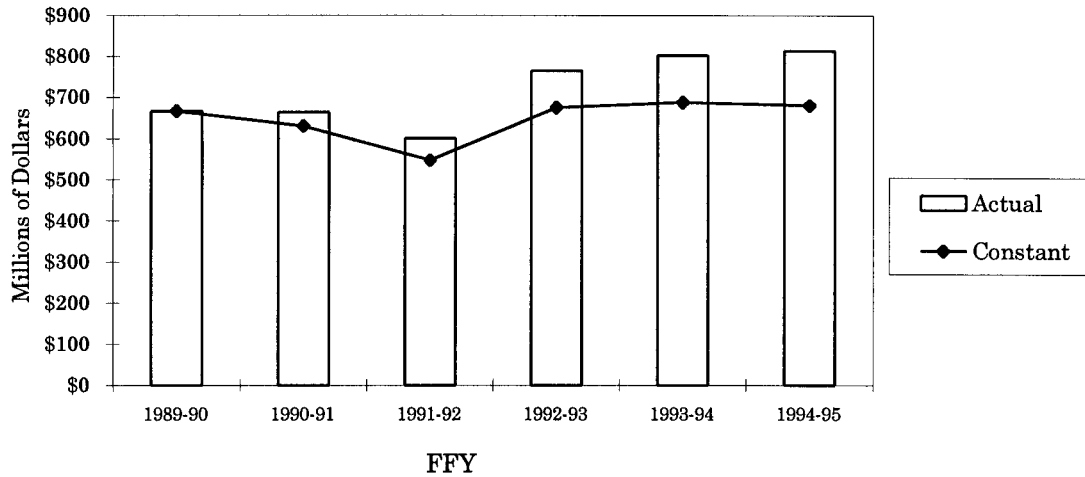
We compared PennDOT's maintenance spending between 1989 and 1994 against the changes in road conditions over this period as an indication of the cost effectiveness of the Department's maintenance operations. We also compared Pennsylvania as part of a 13-state peer group to assess the relative amount Pennsylvania spends on maintenance and capital improvements compared to these states and to compare the "rideability" of PennDOT-maintained highways to state DOT-maintained highways in other states.

Relationship of Maintenance and Capital Spending to Road Conditions

As shown in Exhibit 1, PennDOT's maintenance spending increased from \$667 million in FFY 1989 to \$814 million in FFY 1994, an increase of 22 percent. However, when adjusted for inflation, the increase is a much more modest 2.0 percent. Over this same period, capital expenditures for highway and bridge construction were stagnant or in decline until FFY 1994. As a result of the increase in 1994, capital expenditures also increased by 22 percent between FFY 1989 and FFY 1994. When adjusted for inflation, however, this increase was also only 2 percent (see Exhibit 2).

Exhibit 1

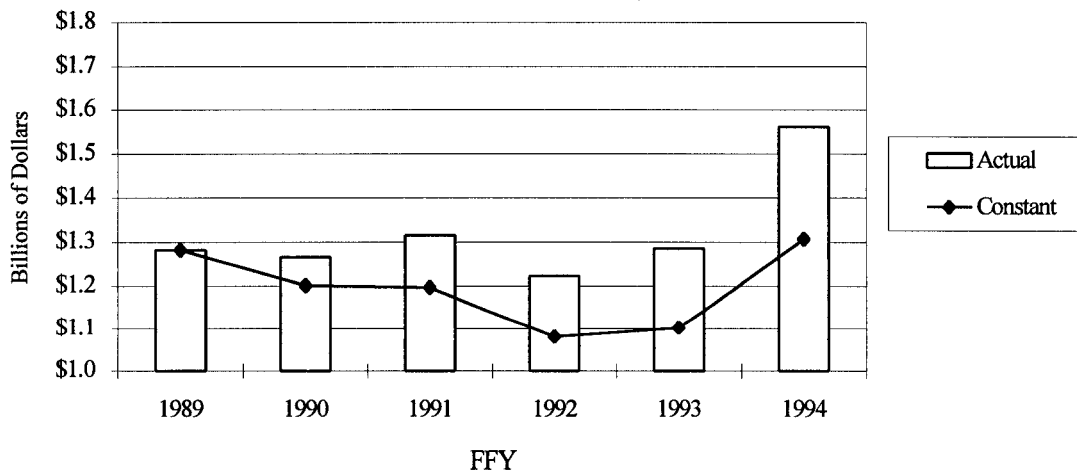
Maintenance Expenditures (Federal and State Funds)



Source: Compiled from Federal Highway Administration's *Highway Statistics*, Table SF-4C, "Disbursements for State-Administered Highways: Classified by Function." Federal fiscal year 1994 runs from October 1, 1993, through September 30, 1994.

Exhibit 2

Capital Expenditures (Federal and State Funds)

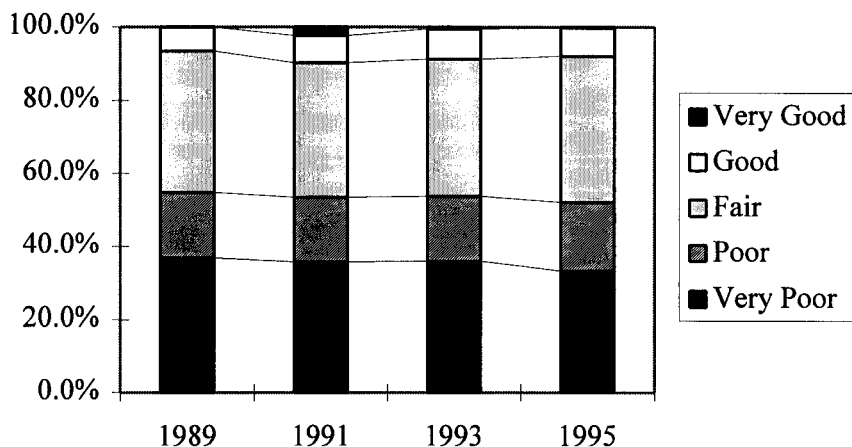


Source: Compiled from Federal Highway Administration's *Highway Statistics*, Table SF-4C, "Disbursements for State-Administered Highways: Classified by Function." Federal fiscal year 1994 runs from October 1, 1993, through September 30, 1994.

From 1989 to 1995, the percentage of PennDOT-maintained roads classified as in poor or very poor condition as measured by the International Roughness Index¹ declined by 2.7 percentage points, from 54.8 percent to 52.1 percent (see Exhibit 3). The percentage of Pennsylvania roads rated as in good or very good condition also improved modestly, increasing from 6.6 percent in 1989 to 7.9 percent in 1995.²

Exhibit 3

IRI Rating of PennDOT-Maintained Highways



Source: Developed from information provided by PennDOT's Roadway Management Division.

Although the data shows that the condition of PennDOT-maintained roadways has improved since 1989, many Pennsylvanians are dissatisfied with the quality of the ride on Pennsylvania roadways. During FY 1995-96, PennDOT began measuring customer satisfaction through a Customer Service Index. While this index found that PennDOT generally met customer expectations in most areas surveyed, the ride quality of interstate and numbered traffic routes fell short of meeting expectations. On a five point scale where 3.0 represented "meets expectations," the ride quality of interstates and numbered traffic routes each averaged 2.6, with secondary roads averaging only 2.3. Snow and ice removal, traffic line painting, and directional highway traffic signs essentially met expectations at 2.9, 3.0, and 3.1, respectively.

¹ The International Roughness Index (IRI) rates pavement roughness using mechanical devices that measure the longitudinal profile of the road's surface. PennDOT measures the interstates every year; 50 percent of other PennDOT roads are also evaluated each year using IRI. The 1995 figures, therefore, are based 50 percent on 1994 data and 50 percent on 1995 data.

² Similar trends are found using PennDOT's Overall Pavement Index (OPI). The OPI is a more encompassing measure of a road's condition using four indices: IRI, a Structural Index, a Surface Distress Index, and a Safety Index. Using OPI, the percentage of roads in poor or very poor condition decreased from 52 percent in 1989 to 49 percent in 1995. We used the IRI measure in this finding because other states do not measure OPI. Additional information on the OPI measure can be found on page 207.

Pennsylvania Expenditures and Road Conditions Compared to Other States

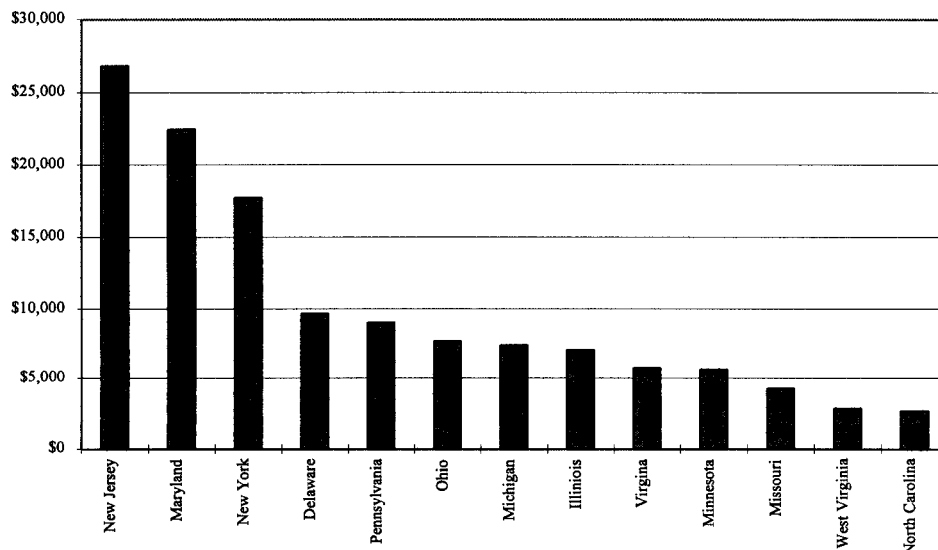
To provide perspective on these statistics, we compared Pennsylvania's maintenance and capital expenditures per lane mile to the six contiguous states and six other states that administer large highway systems with roughly similar climates. We also compared Pennsylvania against these states on pavement quality for interstates and principal arterial roads.

Maintenance and Capital Expenditures

Exhibit 4 shows that PennDOT's 1994 maintenance expenditures per lane mile were fifth highest of the 13 peer states. Exhibit 5 shows that PennDOT ranked in the middle among the 13 peer states on capital expenditures per mile. The Department noted, however, that Pennsylvania, unlike many states, classifies "betterment" projects as maintenance rather than construction. Betterments, defined as the major rehabilitation of highways, include structural surface improvements with shoulder updates, guiderail updates, and drainage improvements. Some of the difference in maintenance and construction spending between Pennsylvania and the other states may therefore be due to how projects are classified.

Exhibit 4

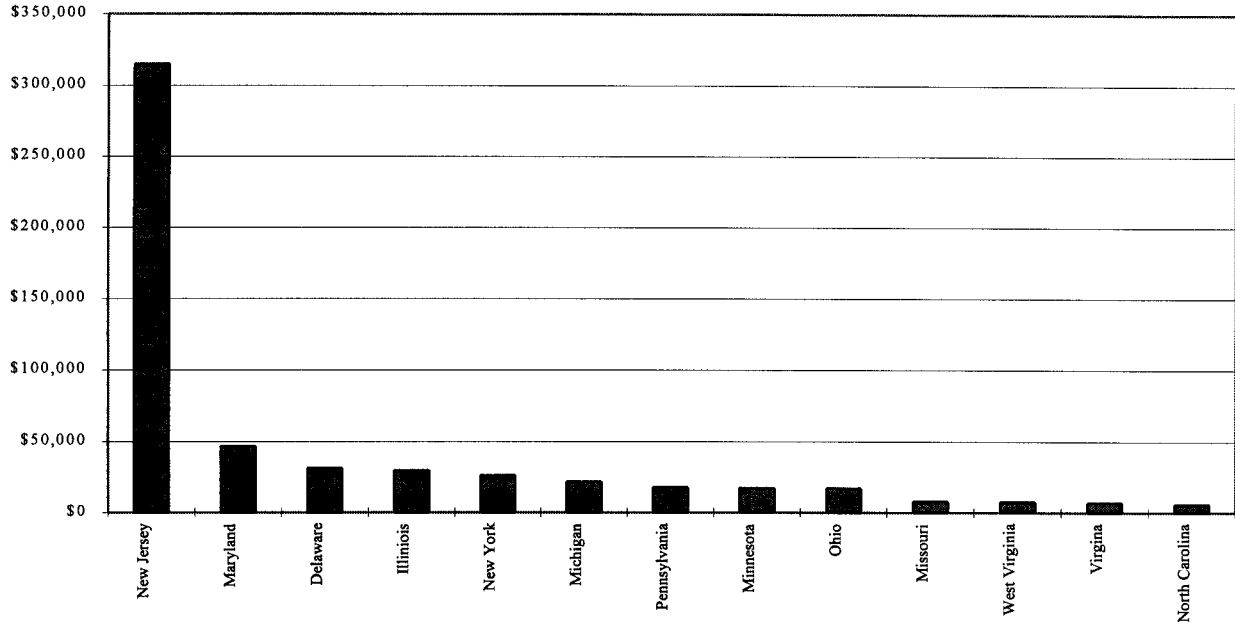
1994 Maintenance Expenditures Per Lane Mile (Federal and State Funds)



Source: Developed from Federal Highway Administration's *1994 Highway Statistics* Tables SF-4 and HM-81 and information provided by the states' transportation departments.

Exhibit 5

1994 Construction Expenditures Per Lane Mile
(Federal and State Funds)



Source: Developed from Federal Highway Administration's *1994 Highway Statistics* Tables SF-4 and HM-81 and information provided by the states' transportation departments.

Road Conditions

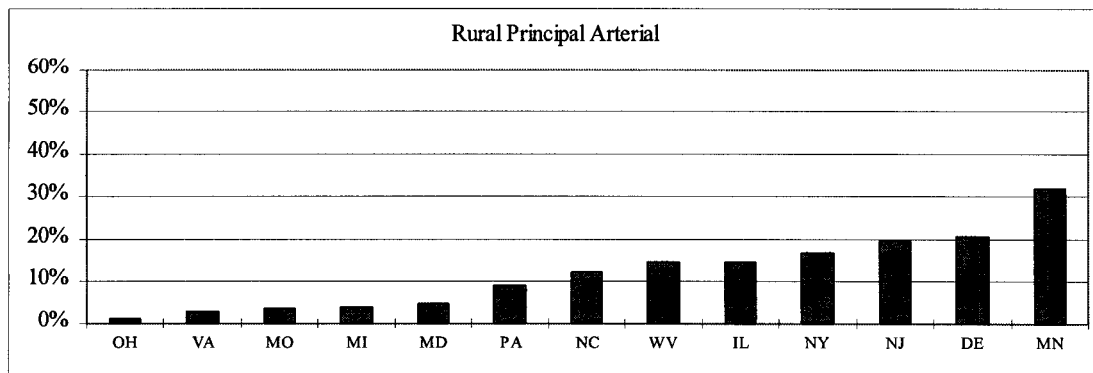
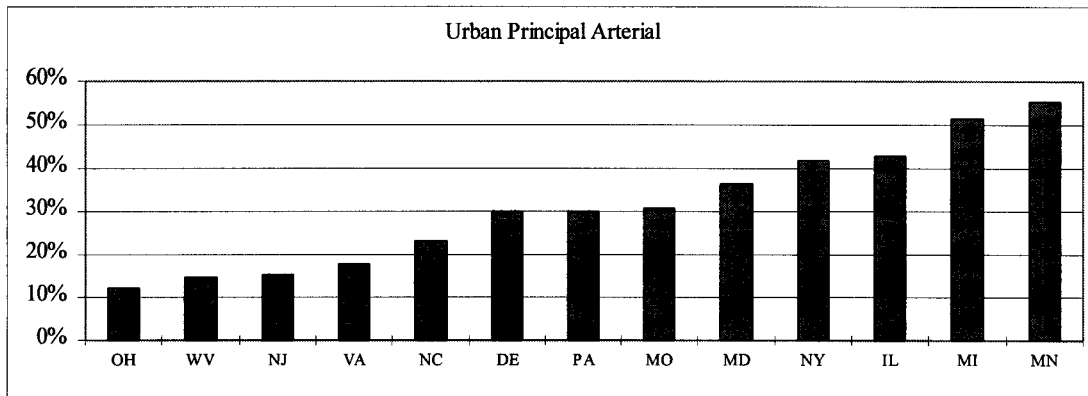
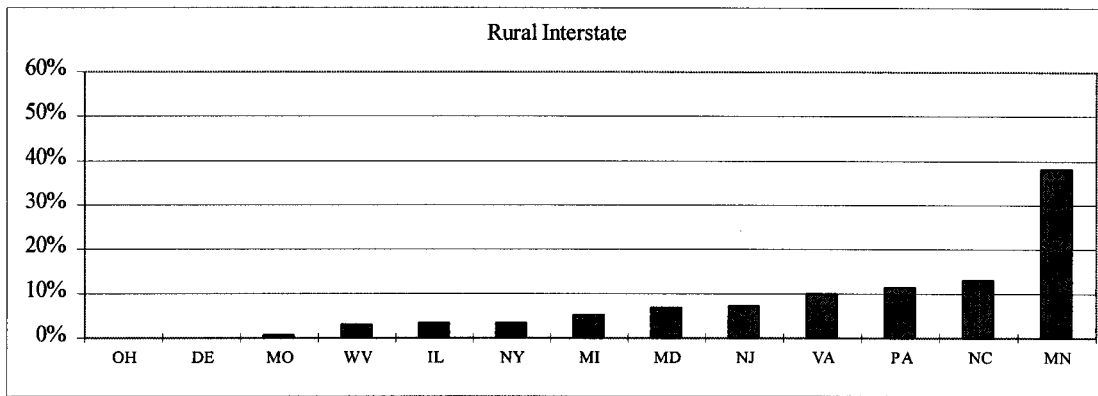
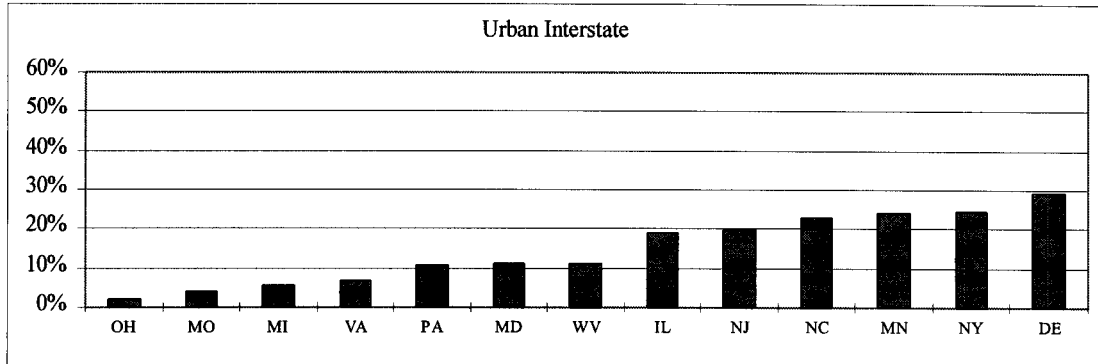
In a 1995 poll conducted for *Overdrive Magazine*, a random sample of truckers from across the nation voted Pennsylvania as the state with the worst roads in the nation for the fifth consecutive year. Illinois was voted as second worst. The top five factors cited by those voting for the worst roads were potholes, congestion and traffic, washboarding (created by bumps on a road similar to an old washboard), constant construction, and cracks. Interstate 80 in Pennsylvania was voted the worst road in the nation; Interstate 81 in Pennsylvania was tied for 10th worst. Perhaps more surprisingly, the truckers also ranked Pennsylvania as ninth on the list of the ten states with the best roads, indicating that at least some of Pennsylvania's highways are viewed as among the best in the nation.

We found that the pavement condition of Pennsylvania's interstates and principal arterial roads in 1994 were actually about average when compared to a 13-state peer group.³ This comparison shows that Pennsylvania ranks seventh out of 13 in the percentage of urban principal arterials in poor or very poor condition. Pennsylvania's rural principal arterials were slightly above average, ranking sixth best while urban interstates ranked fifth best. As shown on Exhibit 6, Pennsylvania's rural interstates fared most poorly when compared to the other peer states, ranking third worst.

³ IRI information was not available to perform a similar comparison for minor arterial roads.

Exhibit 6

**Percent of Roads With Poor or Very Poor IRI Rating
1994**



Source: Developed from the Federal Highway Administration's *Highway Statistics 1994*.

FINDING A2

County Maintenance Funding, Which Is Determined Through a Statutory Formula, Is Inequitable and Bears Little Relationship to Actual Highway Needs

Summary: PennDOT distributes maintenance monies to county maintenance districts based on a formula established in Act 1980-68. The single most important factor in this formula is the “base allocation,” defined as the amount the county received for maintenance in FY 1978-79 or FY 1979-80, whichever was higher. Because of the emphasis the formula places on the historical base allocation and other factors, counties with the best roads on average receive far more maintenance monies, both on a per lane mile basis and as a percentage of their highway needs, than counties with the worst roads. The discrepancies between counties will continue to grow until the maintenance allocation formula is changed to give greater emphasis to actual highway needs.

Prior to 1970, county maintenance district budgets were based largely on historical experience. These budgets were based on estimates of the financial resources necessary to meet payroll and operational expenses. In 1970, the Department sought to improve its highway maintenance management system. This included introducing the concept of performance budgeting to identify the financial resources needed to meet major maintenance work activities. Under this system, county allocations were made through a combination of performance budgeting under PennDOT’s “Highway Maintenance Management System” for routine maintenance and on a formula basis for betterment projects.

In 1980, the General Assembly passed Act 68 which provided, for the first time, a specific formula in law for the allocation of state highway maintenance funds among the 67 counties.

The Maintenance Allocation Formula

Act 68 requires that state highway maintenance monies be allocated to the county maintenance districts based on a formula consisting of two components:¹

¹Act 68 contains provisions for various contingencies that have never occurred or have occurred only rarely. This finding has been simplified to include only the most relevant provisions.

1. An amount equal to 95 percent of the county's "base allocation" (the base allocation is the total highway maintenance appropriations and executive authorizations received by a county maintenance district for FY 1978-79 or FY 1979-80, whichever was higher); plus
2. An amount based on the following formula, known as the ASHMA (Additional State Highway Maintenance Appropriation) formula, in which each county shall receive a portion of 100 percent of all state highway maintenance appropriations and executive authorizations in excess of 95 percent of the total of all counties' base allocations expressed in the following manner:

$$40\% \text{ RPQI}_c + 15\% \text{ BD}_c + 15\% \text{ LM}_c + 15\% \text{ VM}_c + 15\% \text{ SI}_c$$

(RPQI: relative pavement quality index; BD: bridge deck; LM: lane miles; VM: vehicle miles traveled; SI: snow index; and c: county)

Regardless of the formula's result, if the total of 95 percent of the county's base allocation and the county's ASHMA allocation is less than the county's original base allocation, the county is to receive its base allocation figure. More simply, no county receives less than 100 percent of its base allocation. This is known as the "hold harmless" provision.

The ASHMA formula consists of the following components:

1. The *Relative Pavement Quality Index (RPQI)*, which comprises 40 percent of the ASHMA formula, is based on four other indices. Eighty percent of the RPQI is based on the Systematic Techniques to Analyze and Manage Pennsylvania Pavements (STAMPP). The STAMPP roadway management system is an annual survey of all PennDOT-maintained roads to assess the condition of pavement, shoulders, drainage, and guiderails. A series of computer programs then assigns a treatment strategy to each roadway segment and estimates the cost of treatment. An index of the relative roadway needs of the county is then developed based on each county's needs as a percentage of PennDOT's total needs.

The STAMPP survey also provides the data for a *drainage index* and a *guiderail index*. The drainage index and the guiderail index each account for 7.5 percent of the RPQI, respectively.

The final 5 percent of the RPQI comprises a *Truck Vehicle Miles Traveled (TM) index*. The TM index is the particular county's truck vehicle miles traveled as a percentage of total statewide truck vehicle miles.

2. The square footage of PennDOT-maintained highway *bridge deck* in each county (BDc) as a proportion of PennDOT's total square footage comprises 15 percent of the formula.
3. Another 15 percent of the formula is comprised of the number of PennDOT-maintained highway *lane miles* in each county (LMc) as a proportion of the total number of PennDOT-maintained lane miles.
4. The number of *vehicle miles traveled* in each county (VMc) as a proportion of the total vehicle miles traveled in the Commonwealth comprises 15 percent of the formula.
5. The *snow index* for each county (SIc) accounts for the final 15 percent of the formula. The snow index is each county's proportionate share of snow days for the past four calendar years multiplied by the number of PennDOT-maintained highway lane miles in each county.

The base allocation was intended to provide stability and assure that no district would lose funds as a result of the formula. The ASHMA formula, on the other hand, attempts to reflect the conditions that determine the relative need for funds given the size, use, and condition of the state highway system in each county. Although the percentage varies widely from county to county, in recent years the base allocation has averaged about 60 percent of the total maintenance allocation, with the remaining 40 percent being subject to the ASHMA formula.

Act 68 requires PennDOT to update and recertify by May 1 of each year all applicable data for computing the ASHMA formula. The process is an ongoing one with data collection and surveys of selected highway segments occurring throughout the year. County allocations are computed in the second half of the fiscal year (January through May) for the upcoming fiscal year. The allocations are re-computed and submitted with PennDOT's rebudget after the legislative appropriation is established.

The Maintenance Allocation Formula Bears Little Relationship to Actual Highway Needs

We and others have noted problems with the maintenance allocation formula established in Act 68. In December 1981, the LB&FC released a report citing several weaknesses in both the process used to establish the base allocation and in the ASHMA formula. The primary problems we found with the base allocation were (1) in some cases base allocations were based on estimated rather than actual expenditures; (2) in some cases base allocations are artificially high due to the inclusion of high-cost betterment projects during FY 1978-79 or FY 1979-80, the base allocation years; and (3) the base allocation methodology contains no provisions for updating

or revising to account for future change. The two primary problems we identified with the ASHMA formula were the lack of a freeze index and a truck weight factor. (The Department subsequently modified the ASHMA formula through regulation to incorporate these two factors.)

In December 1982, the Pennsylvania Economy League issued a follow-up to our 1981 report in which it made 22 recommendations regarding the allocation formula and the data used to implement the formula. The Economy League recommended that a portion of the maintenance allocation continue to be distributed using the base allocation, but that the method of calculating the base allocation be changed. The report also made many recommendations to replace and revise various factors and weighting used in the ASHMA formula and that the percentage of funds distributed under the ASHMA portion of the maintenance allocation formula be increased.

More recently, in a June 1994 report on Pennsylvania's pothole problems, we cited the lack of a needs-based maintenance allocation formula as a contributing factor to the poor condition of the roads in several counties.

Despite these and other criticisms, the basic allocation formula established in Act 68 has never been amended, although, as noted above, the Department has made adjustments to certain portions of the formula. To assess the impact the Act 68 maintenance allocation formula has had on state highways in the various counties, we compared the amount counties receive under the formula to county needs as reported in PennDOT's *Roadway Needs Report*. Act 68 requires PennDOT to produce the *Roadway Needs Report* annually based on data collected during the STAMPP survey. The *Roadway Needs Report* lists the various maintenance activities needed by type of road and estimates the cost to correct the identified deficiencies.

Table 1 compares 1994 county maintenance needs to their FY 1995-96 allocation. As can be seen in the table, several counties (Allegheny, Cameron, Carbon, and Venango) received allocations in excess of 200 percent of their reported needs whereas other counties (Bucks, Somerset, Wayne, and Westmoreland) received allocations that met less than 60 percent of their needs.

Important Note: The tables presented below indicate the percentage of county roadway needs that would be supported by the maintenance allocation if the county's entire allocation were devoted to direct materials and direct labor. However, county allocations must also cover costs such as overhead at the central office, engineering district, and county levels and the cost of mowing and winter maintenance, such as snow removal (the estimated cost of other routine maintenance services is included in the needs figure). Thus, the "percentage of maintenance needs" figures presented below can be used as only a relative measure to assess disparities between counties, not as an absolute measure of a county's ability to meet its needs.

Table 1

**Comparison of 1994 Roadway Needs With
FY 1995-96 Maintenance Allocation, by County**
(\$000)

| <u>District/County</u> | <u>1994 Maintenance Needs</u> | <u>FY 1995-96 Maintenance Allocation</u> | <u>Percentage of Maintenance Needs Met</u> |
|------------------------|---------------------------------------|--|--|
| <u>District 1</u> | | | |
| Crawford | \$ 10,882 | \$ 14,676 | 135% |
| Erie | 12,078 | 18,272 | 151 |
| Forest | 4,289 | 3,560 | 83 |
| Mercer | 10,160 | 12,990 | 128 |
| Venango | 5,304 | 11,655 | 220 |
| Warren | 6,633 | 8,951 | 135 |
| <u>District 2</u> | | | |
| Centre | \$ 6,360 | \$ 10,175 | 160% |
| Clearfield | 16,700 | 15,466 | 93 |
| Clinton | 4,462 | 6,014 | 135 |
| Cameron..... | 956 | 2,375 | 248 |
| McKean | 9,234 | 7,449 | 81 |
| Potter..... | 9,966 | 7,610 | 76 |
| Mifflin..... | 2,442 | 4,194 | 172 |
| Elk | 5,050 | 6,555 | 130 |
| Juniata | 4,096 | 4,808 | 117 |
| <u>District 3</u> | | | |
| Columbia..... | \$ 6,756 | \$ 8,417 | 125% |
| Lycoming..... | 10,143 | 13,010 | 128 |
| Montour | 2,006 | 3,254 | 162 |
| Northumberland..... | 6,627 | 9,556 | 144 |
| Snyder | 5,247 | 4,930 | 94 |
| Sullivan..... | 3,555 | 4,028 | 113 |
| Tioga..... | 8,611 | 10,711 | 124 |
| Union..... | 3,267 | 4,991 | 153 |
| Bradford..... | 22,647 | 13,977 | 62 |
| <u>District 4</u> | | | |
| Lackawanna..... | \$ 8,472 | \$ 13,371 | 158% |
| Luzerne | 11,708 | 19,255 | 164 |
| Pike | 8,042 | 5,891 | 73 |
| Susquehanna | 13,960 | 11,952 | 86 |
| Wayne | 17,753 | 10,305 | 58 |
| Wyoming | 5,240 | 5,477 | 105 |
| <u>District 5</u> | | | |
| Berks | \$ 12,433 | \$ 14,419 | 116% |
| Carbon..... | 3,057 | 7,061 | 231 |
| Lehigh | 7,072 | 10,267 | 145 |
| Monroe | 14,852 | 10,963 | 74 |
| Northampton | 10,905 | 8,996 | 82 |
| Schuylkill | 10,528 | 11,192 | 106 |

Table 1 (Continued)

| <u>District/County</u> | <u>1994 Maintenance Needs</u> | <u>FY 1995-96 Maintenance Allocation</u> | <u>Percentage of Maintenance Needs Met</u> |
|--------------------------|---------------------------------------|--|--|
| <u>District 6</u> | | | |
| Bucks..... | \$ 38,004 | \$ 21,549 | 57% |
| Chester..... | 30,713 | 19,578 | 64 |
| Delaware..... | 14,345 | 14,999 | 105 |
| Montgomery..... | 18,126 | 20,864 | 115 |
| Philadelphia..... | 15,878 | 21,292 | 134 |
| <u>District 8</u> | | | |
| Adams..... | \$ 6,318 | \$ 8,771 | 139% |
| Cumberland..... | 7,630 | 10,982 | 144 |
| Franklin..... | 8,948 | 10,484 | 117 |
| York..... | 16,870 | 17,430 | 103 |
| Dauphin..... | 9,673 | 12,668 | 131 |
| Lancaster..... | 14,889 | 19,373 | 130 |
| Lebanon..... | 4,935 | 7,386 | 150 |
| Perry..... | 5,540 | 6,230 | 112 |
| <u>District 9</u> | | | |
| Bedford..... | \$ 15,851 | \$ 10,584 | 67% |
| Blair..... | 14,979 | 9,174 | 61 |
| Cambria..... | 23,767 | 15,520 | 65 |
| Fulton..... | 4,493 | 5,100 | 113 |
| Huntingdon..... | 13,318 | 8,028 | 60 |
| Somerset..... | 27,918 | 16,349 | 59 |
| <u>District 10</u> | | | |
| Armstrong..... | \$ 19,142 | \$ 11,783 | 62% |
| Butler..... | 20,976 | 13,381 | 64 |
| Clarion..... | 7,171 | 9,153 | 128 |
| Indiana..... | 17,512 | 15,161 | 87 |
| Jefferson..... | 11,721 | 10,219 | 87 |
| <u>District 11</u> | | | |
| Allegheny..... | \$ 26,944 | \$ 58,974 | 219% |
| Beaver..... | 14,220 | 13,893 | 98 |
| Lawrence..... | 5,679 | 7,900 | 139 |
| <u>District 12</u> | | | |
| Fayette..... | \$ 18,480 | \$ 15,094 | 82% |
| Greene..... | 16,898 | 11,372 | 67 |
| Washington..... | 32,692 | 23,115 | 71 |
| Westmoreland..... | <u>47,739</u> | <u>25,962</u> | 54 |
| Total ^a | \$832,866 | \$809,141 | 97% |

^aMay not add due to rounding.

Source: Compiled from data provided by PennDOT's Bureau of Fiscal Management and the Roadway Management Division.

Table 2 shows the number of counties receiving various percentages of their county needs.

Table 2

**Percentage of 1994 Maintenance Needs Met
by FY 1995-96 Allocation**

| <u>Percent of Maintenance Met</u> | <u>Number of Counties</u> | <u>Percentage of all Counties</u> |
|---------------------------------------|-------------------------------|---------------------------------------|
| 200% - 250% | 4 | 6% |
| 150% - 199% | 8 | 12 |
| 120% - 149% | 17 | 25 |
| 80% - 119% | 21 | 31 |
| 50% - 79% | 17 | 25 |

Source: Compiled from data provided by PennDOT's Bureau of Fiscal Management and the Roadway Management Division.

We also compared the condition of state-maintained roads as measured by the Overall Pavement Index (OPI) in 1995 against FY 1995-96 county maintenance allocations on both a per lane mile basis and as a percent of reported needs. Table 3 shows that the six counties with the best roads (i.e., the fewest roads in poor or very poor condition) received an average of \$11,721 per lane mile compared to \$8,214 per lane mile in the six counties with the worst roads, a difference of \$3,504 per mile. Moreover, the six counties with the best roads received maintenance allocations that averaged 202 percent of their needs (weighted average) compared to the six counties with the worst roads that received on average only 62 percent of their reported needs.

As noted above, these discrepancies occur because the maintenance allocation formula is based primarily on allocations made in the late 1970s with little provision for actual maintenance needs. Because the basic formula has not changed since 1980, the effect of these discrepancies has been compounding for 16 years.

While it was beyond the scope of this audit to develop a specific alternative allocation formula, for illustrative purposes we did calculate how county maintenance districts would fair against their reported needs under two alternatives: (1) the ASHMA formula alone and (2) a formula based 50 percent on the ASHMA formula and 50 percent on reported needs. The results of these calculations are

Table 3

**1995 County Road Conditions and
FY 1995-96 County Maintenance Allocations**

| <u>County</u> | <u>Percent of Roads in Poor or Very Poor Condition</u> | <u>\$ Per Lane Mile</u> | <u>Percent of Maintenance Needs Met</u> |
|----------------------|--|-------------------------|---|
| Cameron | 13.1% | \$10,463 | 248% |
| Venango | 17.6 | 10,215 | 220 |
| Clinton | 27.2 | 8,805 | 135 |
| Adams | 27.3 | 7,548 | 139 |
| Allegheny | 29.9 | 19,036 | 219 |
| Carbon | 31.1 | 12,259 | 231 |
| Northampton | 31.1 | 8,216 | 82 |
| Elk | 31.2 | 11,017 | 130 |
| Erie | 32.2 | 9,930 | 151 |
| Lehigh | 32.7 | 8,327 | 145 |
| Mercer | 33.1 | 7,916 | 128 |
| Franklin | 33.6 | 7,812 | 117 |
| Berks | 33.7 | 7,010 | 116 |
| Schuylkill | 35.8 | 8,063 | 106 |
| Centre | 36.5 | 7,943 | 160 |
| Lebanon | 36.7 | 8,179 | 150 |
| Dauphin | 37.0 | 9,294 | 131 |
| Crawford | 37.9 | 7,664 | 135 |
| Lycoming | 41.7 | 7,763 | 128 |
| McKean | 41.9 | 9,335 | 81 |
| Lawrence | 42.4 | 9,018 | 139 |
| Union | 42.4 | 7,922 | 153 |
| Cumberland | 42.8 | 8,474 | 144 |
| Warren | 43.4 | 8,212 | 135 |
| Montgomery | 44.1 | 11,163 | 115 |
| Delaware | 44.6 | 12,067 | 105 |
| Clearfield | 44.7 | 8,818 | 93 |
| Mifflin | 45.4 | 8,456 | 172 |
| Indiana | 45.7 | 8,998 | 87 |
| Luzerne | 46.0 | 9,374 | 164 |
| Lancaster | 46.4 | 7,963 | 130 |
| Monroe | 46.5 | 8,913 | 74 |
| Fulton | 47.0 | 6,615 | 113 |
| Northumberland | 47.0 | 8,266 | 144 |
| Tioga | 47.0 | 8,414 | 124 |
| Lackawanna | 47.2 | 10,422 | 158 |
| York | 47.2 | 6,997 | 103 |
| Columbia | 47.4 | 7,535 | 125 |

Table 3 (Continued)

| <u>County</u> | <u>Percent of Roads in Poor or Very Poor Condition</u> | <u>\$ Per Lane Mile</u> | <u>Percent of Maintenance Needs Met</u> |
|--------------------|--|-------------------------|---|
| Montour | 47.4% | \$ 8,280 | 162% |
| Beaver | 48.5 | 10,053 | 98 |
| Philadelphia | 49.5 | 14,544 | 134 |
| Juniata..... | 49.7 | 6,394 | 117 |
| Sullivan | 51.1 | 8,137 | 113 |
| Snyder..... | 51.7 | 7,402 | 94 |
| Bucks | 53.0 | 9,468 | 57 |
| Jefferson | 53.9 | 8,840 | 87 |
| Chester | 54.2 | 8,087 | 64 |
| Clarion..... | 54.6 | 9,018 | 128 |
| Blair | 55.3 | 8,518 | 61 |
| Butler..... | 57.1 | 8,962 | 64 |
| Cambria..... | 59.5 | 10,444 | 65 |
| Fayette..... | 59.5 | 9,131 | 82 |
| Forest..... | 60.0 | 8,662 | 83 |
| Bedford | 61.3 | 6,083 | 67 |
| Washington..... | 63.6 | 9,575 | 71 |
| Perry | 63.7 | 7,055 | 112 |
| Greene | 64.1 | 9,298 | 67 |
| Pike..... | 66.1 | 8,037 | 73 |
| Bradford..... | 66.2 | 7,567 | 62 |
| Wyoming..... | 67.4 | 7,216 | 105 |
| Huntingdon | 67.9 | 6,282 | 60 |
| Potter | 69.4 | 8,130 | 76 |
| Somerset..... | 70.5 | 8,953 | 59 |
| Westmoreland | 70.5 | 9,687 | 54 |
| Wayne | 71.1 | 7,078 | 58 |
| Susquehanna..... | 73.8 | 7,093 | 86 |
| Armstrong | 76.1 | 8,363 | 62 |
| Statewide..... | 48.9% | \$ 9,014 | 97% |

^aAs defined by 1995 OPI rating.

Source: Developed from data provided by PennDOT's Roadway Management Division and the Bureau of Fiscal Management

Table 4

**Percentage of 1993 and 1994 County Maintenance Needs Met
Under Two Alternative Formulas: FY 1995-96**

| | Percentage of County Maintenance Needs Met Under Act 68 <u>Formula</u> | Percentage of County Maintenance Needs Met Under an ASHMA-Only <u>Formula</u> | Percentage of County Maintenance Needs Met Using 50% ASHMA and 50% <u>Reported Needs</u> |
|----------------------|---|---|--|
| Cameron | 248% | 130% | 114% |
| Carbon | 231 | 134 | 116 |
| Venango | 220 | 146 | 122 |
| Allegheny | 219 | 161 | 129 |
| Mifflin | 172 | 129 | 113 |
| Luzerne | 164 | 147 | 122 |
| Montour | 162 | 114 | 106 |
| Centre | 160 | 141 | 119 |
| Lackawanna | 158 | 137 | 117 |
| Union | 153 | 120 | 109 |
| Erie | 151 | 153 | 125 |
| Lebanon | 150 | 121 | 109 |
| Lehigh | 145 | 149 | 123 |
| Northumberland | 144 | 117 | 107 |
| Cumberland | 144 | 135 | 116 |
| Lawrence | 139 | 118 | 108 |
| Adams | 139 | 111 | 104 |
| Warren | 135 | 127 | 112 |
| Crawford | 135 | 139 | 118 |
| Clinton | 135 | 127 | 112 |
| Philadelphia | 134 | 206 | 152 |
| Dauphin | 131 | 163 | 130 |
| Lancaster | 130 | 129 | 113 |
| Elk | 130 | 94 | 96 |
| Lycoming | 128 | 117 | 107 |
| Mercer | 128 | 121 | 109 |
| Clarion | 128 | 110 | 104 |
| Columbia | 125 | 108 | 103 |
| Tioga | 124 | 103 | 100 |
| Juniata | 117 | 102 | 99 |
| Franklin | 117 | 101 | 99 |
| Berks | 116 | 129 | 113 |
| Montgomery | 115 | 124 | 111 |
| Fulton | 113 | 88 | 93 |
| Sullivan | 113 | 78 | 88 |
| Perry | 112 | 91 | 94 |

Table 4 (Continued)

| | Percentage of County Maintenance Needs Met Under Act 68 <u>Formula</u> | Percentage of County Maintenance Needs Met Under an ASHMA-Only <u>Formula</u> | Percentage of County Maintenance Needs Met Using 50% ASHMA and 50% <u>Reported Needs</u> |
|--------------------|---|---|--|
| Schuylkill..... | 106% | 99% | 98% |
| Delaware..... | 105 | 118 | 108 |
| Wyoming..... | 105 | 92 | 95 |
| York | 103 | 104 | 101 |
| Beaver..... | 98 | 89 | 93 |
| Snyder..... | 94 | 89 | 93 |
| Clearfield | 93 | 87 | 92 |
| Jefferson | 87 | 85 | 91 |
| Indiana | 87 | 82 | 90 |
| Susquehanna..... | 86 | 86 | 92 |
| Forest..... | 83 | 81 | 89 |
| Northampton..... | 82 | 104 | 101 |
| Fayette..... | 82 | 76 | 87 |
| McKean..... | 81 | 88 | 93 |
| Potter | 76 | 74 | 86 |
| Monroe..... | 74 | 83 | 90 |
| Pike..... | 73 | 78 | 88 |
| Washington..... | 71 | 69 | 83 |
| Greene | 67 | 58 | 78 |
| Bedford | 67 | 78 | 88 |
| Cambria | 65 | 77 | 87 |
| Chester | 65 | 75 | 87 |
| Butler..... | 64 | 76 | 86 |
| Bradford..... | 62 | 69 | 83 |
| Armstrong..... | 62 | 69 | 83 |
| Blair | 61 | 82 | 89 |
| Huntingdon | 60 | 68 | 83 |
| Somerset..... | 59 | 71 | 84 |
| Wayne | 58 | 69 | 83 |
| Bucks | 57 | 76 | 87 |
| Westmoreland | 54 | 66 | 82 |

Source: Developed from information provided by PennDOT's Bureau of Maintenance and Operations and Bureau of Fiscal Management.

shown in Table 4 together with the percentage of county needs met under the current Act 68 formula for a point of comparison.

Table 5 shows that under the ASHMA-only formula the number of counties receiving more than 150 percent of their needs is reduced to four (compared to 12 counties under the Act 68 formula). Under a 50 percent ASHMA/50 percent county needs formula, only one county, Philadelphia, receives more than 150 percent of its needs (152 percent). Under the ASHMA-only formula, (Table 5), as under the Act 68 formula (Table 2), 17 counties receive less than 80 percent of their needs. Under a 50 percent ASHMA/50 percent reported needs formula, only one county would receive less than 80 percent of its needs. Thus, the ASHMA-only formula better reflects reported county needs than the Act 68 formula, and the 50 percent ASHMA/50 percent reported needs formula better reflects reported county needs than either of the other approaches.²

Table 5

**Percentage of Maintenance Needs Met
Under Two Alternative Approaches**
(Based on FY 1995-96 Appropriation)

| <u>Percent of Maintenance Met</u> | <i>ASHMA-Only Formula</i> <u>Number (%) of Counties</u> | <i>50% ASHMA/50% Reported Needs Formula</i> <u>Number (%) of Counties</u> |
|---------------------------------------|--|--|
| 200% - 250% | 1 (1%) | 0 (0%) |
| 150% - 199% | 3 (4%) | 1 (1%) |
| 120% - 149% | 18 (27%) | 6 (9%) |
| 80% - 119% | 28 (42%) | 59 (88%) |
| 50%-79% | 17 (25%) | 1 (1%) |

Source: Compiled from data provided by PennDOT's Bureau of Fiscal Management and the Roadway Management Division.

Recommendations

- 1. The General Assembly should amend the maintenance allocation formula established in Act 68 to better reflect actual maintenance needs. To begin this process, we recommend that the House and/or Senate**

²If the goal was only to reflect reported county needs, the "best" alternative would be to simply use the county needs reports as the sole basis for the allocation formula, which would mean that in FY 1995-96 all counties would receive an allocation equal to 97 percent of their needs. However, county-to-county variations due to other factors, such as snow removal and legitimate variations in overhead costs, make an allocation based solely on county needs problematic.

Transportation Committees request that PennDOT develop one or more alternative formulas to achieve this result.³

- 2. To allow time for the county maintenance offices to adjust to a new allocation formula, we recommend that whatever formula is developed be phased in over a multi-year period or that annual changes be capped (e.g., a county could lose no more than 10 percent of its funds in any one year) to provide a degree of stability during the transition period.**

³ The United States General Accounting Office issued a report in November 1995 (*Highway Funding: Alternatives for Distributing Federal Funds*, GAO/RCED-96-6) that contains other approaches that also might be applicable to Pennsylvania.

FINDING A3

PennDOT Does Not Have a Standard Methodology to Determine Whether to Perform Routine Maintenance Work In-House or by Contract

Summary: PennDOT does not have a standard methodology in place to determine whether to perform routine maintenance services in-house or through contracts with the private sector. Decisions to contract out appear to be driven largely by personnel and equipment constraints at PennDOT's county maintenance districts rather than by an analysis of the merits of the alternative approaches.

During FY 1994-95, PennDOT spent \$636.9 million on routine maintenance work such as mechanical patching, surface treatment, joint/crack sealing, road shoulder work, pipe/culvert replacement, winter traffic services, bridge cleaning, mowing, rest area maintenance, line painting, and repairing and servicing construction equipment. Of this amount, 23 percent (\$147.5 million) was done through contracts with private sector firms with the remainder being done in-house, primarily by staff at the county maintenance districts.

PennDOT's Current Procedures

Given the large amount PennDOT spends on maintenance activities, we sought to determine what procedures the Department uses when making decisions to do work in-house or through contracts with private sector firms. We found that the Department maintains detailed information on the cost to conduct various routine maintenance activities with in-house staff. PennDOT does not, however, have a standard methodology or set of procedures for district and county maintenance offices to ensure that these cost figures are being properly compared to bids they receive from private firms.

For example, when we asked county maintenance managers how they make in-house vs. contract-out decisions, several responded, in essence, that "we do what we can with in-house staff and contract out the rest." One county manager we spoke to noted that his county's PMO (permanent maintenance organization, i.e., highway maintenance worker) complement has decreased by more than 20 percent over the past ten years. As a result, he does not have enough people to do pavement work so it is all contracted out. Another county manager noted that his PMO complement decreased by 18 percent over the past five years. Several others stated

that their ability to do work in-house is constrained by their lack of equipment, so they contract out.

Despite the lack of a structured process for analyzing decisions to contract out, most of the managers we spoke to felt confident that contracting out was cost effective for many services. These managers cited the overhead costs associated with state government and the salary and benefit structure and work rules of its unionized work force as reasons why it is difficult for PennDOT to be competitive with the private sector. One county maintenance manager we interviewed believed, however, that his in-house staff is very competitive with the private contractors in his area.

Several PennDOT county maintenance managers were concerned that contractor prices could escalate dramatically if they do not retain at least some ability to do work in-house. One county maintenance manager cited an example that occurred in his county during the 1980s when they had eliminated their ability to seal coat roads and contractor prices went "sky-high." This manager cited several other examples where the ability to do work in-house helped contain private-sector contract costs (e.g., by purchasing one milling machine, one county was reportedly able to hold down the bid prices on rentals for such equipment).

Under its current union agreement, PennDOT is required to meet and discuss potential contracting arrangements. Section 6 of Article 43 of the Master Agreement between the Commonwealth and Council 13 of the American Federation of State, County and Municipal Employees (AFSCME) requires as follows:

At each site where a proposed contract/assignment is to occur, local labor/management committees shall meet and discuss over the reasons for the assignment. At this time the Employer shall provide to the union all information it has to support a claim of reasonable cost saving or improved service. The union shall have the opportunity to provide alternative methods to attaining the Employer's desired result. In the event that the parties at the local level are unable to resolve the issue, the contract or the assignment made may be implemented and the matter shall be referred to a committee comprised of Council 13, the Agency and the Office of Administration. Should the parties be unable to resolve the issue, the union shall notify the Office of Administration in writing of its intent to submit the matter to the grievance procedure.

Although in the past AFSCME has rarely challenged PennDOT's contracting out decisions (we are aware of only one recent instance), such challenges may become more frequent given the greater emphasis PennDOT appears to be placing on contacting out. To meet such future challenges--and, more importantly, to ensure that cost-effective decisions are being made--the Department needs to develop a more formalized procedure for analyzing and documenting their in-house versus

contracting out decisions. We found, for example, that the analysis one PennDOT manager presented to the union during a meet and discuss meeting regarding contracting for mowing services was done literally on the back of an envelope.

Other States

At least two other states, Texas and Oregon, have taken a more formalized approach when deciding whether to do work in-house or by contract.

Texas

The Texas General Appropriations Bill of 1989 directed the Texas DOT to contract no less than 25 percent of certain maintenance work, provided comparable quality work at comparable quantities can be achieved at a savings of more than 10 percent. In 1992 the Texas legislature directed Texas DOT to contract 50 percent of all routine maintenance by FY 1996-97. This time schedule was intended to provide a reasonable time for transition in the DOT districts and to allow time for a more diverse local contracting industry capable of performing routine maintenance functions to emerge and grow.

To implement these requirements, Texas developed a “contractibility” rating for key maintenance activities. The Department identified seven contractibility factors: a Maintenance Efficiency and Analysis Report (MEAR) which compares the unit cost to do work in-house and by contract; labor intensity; availability of contractors; the volume of work; time sensitivity; the need for special skills or equipment; and the amount of inspection required. These factors are weighted to arrive at scores which are then summed to arrive at a total “contractibility” score (see Table 6). Based upon this analysis, contracting out was determined to be cost effective for 32.7 percent of routine maintenance expenditures. The Contracting Decision Worksheet used in Texas for comparing costs is shown in Exhibit 7. The contractibility ratings for one Texas engineering district are presented on Table 7.

Texas also decided to set minimum and maximum limits for contracting. A minimum contracting limit, even though it was not necessarily cost effective, would provide comparative data against which to judge the reasonableness of contractor costs. A maximum contracting limit would also allow the state to maintain the proper expertise and capability of performing a function. A 10 percent minimum limit and a 90 percent maximum limit were chosen.

Oregon

Oregon’s DOT has also formalized procedures for making in-house versus contracting out decisions. For contracting out, direct costs are the actual amounts paid to the contractor and indirect costs are estimated for:

| | |
|--------------------------------------|---------------------|
| Preliminary Engineering (PE) | 5% of the Total Bid |
| Contract Administration: | |
| DGS Contract Fee (CF) | 5% of the Total Bid |
| Government-wide Overhead Factor..... | 8.7% of PE & CF |

Table 6

Texas Contractibility Rating Values

| <u>Factor</u> | <u>Weight</u> | <u>Score</u> | <u>Maximum</u> |
|---|---------------|--------------|----------------|
| MEAR Value | 5 | 0 to 3 | 15 |
| 0 = + % or no score (state cost effective) | | | |
| 1 = 0% or no score | | | |
| 2 = -0.01 to -9.99% | | | |
| 3 = -10% or greater (contractor cost effective) | | | |
| Labor Intensity | 4 | 1 to 3 | 12 |
| 1 = 0 to 39.99% of Activity Cost | | | |
| 2 = 40 to 59.99% of Activity Cost | | | |
| 3 = 60% or Greater | | | |
| Availability of Contractors | 1 | 1 or 2 | 2 |
| 1 = Low or none available | | | |
| 2 = Good availability | | | |
| Work Volume | 3 | 1 or 2 | 6 |
| 1 = Less than \$100,000 annually | | | |
| 2 = n | | | |
| Time Sensitivity | 1 | 1 or 2 | 2 |
| 1 = Not easily planned | | | |
| 2 = Easily planned | | | |
| Special Skills/Equipment Needed... | 1 | 1 or 2 | 2 |
| 1 = None required | | | |
| 2 = Required | | | |
| Inspection Needs | 1 | 1 or 2 | 2 |
| 1 = Yes | | | |
| 2 = No | | | |

Source: Extracted from Texas DOT *Maximum Maintenance Contracting Guidelines*.

Exhibit 7

Texas DOT Contracting Decision Worksheet

DATE: _____

DECISION: Should the Department contract the following activity or perform it with state forces?

ACTIVITY: _____

AMOUNT OF WORK PLANNED: _____

LOCATION: District _____ Maint. Sec. _____ County _____

COST ELEMENT

| | Costs | |
|--|--------------|-------------------|
| | <u>State</u> | <u>Contractor</u> |
| 1. Salaries (use Composite Rate)..... | \$ _____ | N/A |
| 2. Equipment | _____ | N/A |
| 3. Materials..... | _____ | N/A |
| 4. Contract Cost..... | N/A | \$ _____ |
| 5. Material Furnished to Contractor..... | N/A | _____ |
| SUBTOTAL..... | \$ _____ | \$ _____ |
| 1. Proposed Preparation, Letting and Management (____%)..... | N/A | _____ |
| 2. Inspection (____ %) | N/A | _____ |
| 3. Division Management, Processing, Payment, Etc., (____%) | N/A | _____ |
| SUBTOTAL..... | \$ _____ | \$ _____ |
| TOTAL | \$ _____ | \$ _____ |

NOTE: This analysis should not include the unavoidable overhead costs that would be incurred when performed by state forces or contractor.

Source: NCHRP report #344, *Maintenance Contracting*, December 1991.

Table 7

Contractibility Ratings for One Texas DOT Engineering District

| Description | MEARS | % Labor | Contractor Availability | Work Volume | Time Sensitivity | Special Equip. & Skills | Intensive Inspection | Contractibility Score | % to be Contracted |
|--------------------------------------|-------|---------|-------------------------|-------------|------------------|-------------------------|----------------------|-----------------------|--------------------|
| Base Removal & Repl..... | 5 | 8 | 1 | 6 | 1 | 1 | 3 | 25 | 10.0 |
| Base in Place Repair..... | 5 | 12 | 1 | 3 | 1 | 1 | 3 | 26 | 15.3 |
| Mn. Ln. Overlay w/Laydown.... | 5 | 4 | 2 | 6 | 2 | 2 | 3 | 24 | 10.0 |
| Mn. Ln. Overlay w/Blade | 5 | 4 | 1 | 6 | 2 | 1 | 3 | 22 | 10.0 |
| Sealing Cracks & Joints | 5 | 12 | 2 | 6 | 2 | 1 | 3 | 31 | 42.0 |
| Mn. Ln. Aggregate Seal Coat.... | 5 | 4 | 2 | 6 | 2 | 1 | 3 | 23 | 10.0 |
| Mn. Ln. Aggr. Strip & Spot Seal..... | 5 | 4 | 1 | 3 | 2 | 1 | 3 | 19 | 10.0 |
| Mn. Ln. Aggr. Fog/Sheet Slg.... | 5 | 4 | 1 | 6 | 1 | 1 | 6 | 24 | 10.0 |
| Mn. Ln. Potholes..... | 5 | 12 | 1 | 6 | 1 | 1 | 3 | 29 | 31.3 |
| Milling or Sawing | 5 | 8 | 2 | 6 | 2 | 2 | 6 | 31 | 42.0 |
| Treat Bleeding Pavement | 5 | 8 | 1 | 3 | 1 | 1 | 6 | 25 | 10.0 |
| Mn. Ln. Edge Repair | 10 | 12 | 1 | 6 | 2 | 1 | 6 | 38 | 79.3 |
| Concrete Leveling or Overlay ... | 5 | 12 | 2 | 3 | 2 | 2 | 3 | 29 | 31.3 |
| Sealing Cracks & Joints | 5 | 12 | 2 | 3 | 2 | 1 | 3 | 28 | 26.0 |
| Repair Spalling | 5 | 12 | 2 | 3 | 1 | 1 | 3 | 27 | 20.7 |
| Concrete Remove & Replace | 5 | 12 | 2 | 3 | 2 | 1 | 3 | 28 | 26.0 |
| Shld. Leveling or Overlay | 5 | 8 | 2 | 3 | 2 | 1 | 3 | 24 | 10.0 |
| Sealing Cracks & Joints (Shld). | 5 | 12 | 2 | 3 | 2 | 1 | 3 | 28 | 26.0 |
| Shld. Aggr. Seal Coat | 5 | 8 | 2 | 3 | 2 | 1 | 3 | 24 | 10.0 |
| Shld. Strip or Spot Seal Coat.... | 5 | 12 | 1 | 3 | 2 | 1 | 3 | 27 | 20.7 |
| Shld. Fog or Sheet Sealing | 5 | 4 | 1 | 3 | 1 | 1 | 6 | 21 | 10.0 |
| Shld. Pothole Repair | 5 | 12 | 1 | 3 | 1 | 1 | 3 | 26 | 15.3 |
| Shld. Edge Repair | 15 | 4 | 1 | 3 | 2 | 1 | 6 | 32 | 47.3 |
| Recondition Sod Shoulders | 5 | 8 | 1 | 6 | 2 | 1 | 6 | 29 | 31.3 |
| Blade Flexible Base Shldrs. | 5 | 8 | 1 | 6 | 2 | 1 | 6 | 29 | 31.3 |
| Shld. Base or Subgrade Reprs. . | 15 | 12 | 1 | 3 | 1 | 1 | 3 | 36 | 68.7 |
| Side Road Appchs. & Drives | 5 | 8 | 1 | 6 | 2 | 1 | 3 | 26 | 15.3 |
| Mowing..... | 15 | 4 | 2 | 6 | 2 | 1 | 6 | 36 | 68.7 |
| Litter..... | 15 | 12 | 2 | 6 | 2 | 1 | 6 | 44 | 90.0 |
| Routine Street Sweeping..... | 5 | 8 | 2 | 6 | 2 | 2 | 6 | 31 | 42.0 |

Source: NCHRP Report #344, Maintenance Contracting, December 1991.

Contract administration includes fees paid to the Department of General Services (DGS) and a government-wide overhead factor (GWOF).¹ Except for blade patching and chip seal projects, no additional costs are added for inspection or contract monitoring by state personnel.

In-house costs include direct costs for labor, materials, and equipment, which are obtained from the Department's Maintenance Management System, and indirect costs. Indirect costs include:

- A Unit Overhead Factor for the district offices and district maintenance sections which was applied to the reported direct labor costs. These factors varied by district and section but ranged between 30 and 40 percent.
- The GWOF of 8.7 percent applied to direct labor costs.
- Equipment standby charges. Equipment rental rates were adjusted to include standby time or time that the equipment was not in use.

Factors That Need to Be Considered in Deciding Whether to Contract

The decision to contract out involves both economic and noneconomic factors. PennDOT identified many of these factors in a June 1994 manual for local governments entitled *Maintenance Practices for Local Roads*. The manual provides both a "Decision to Contract" flow chart (see Exhibit 8) and a brief iteration of "factors" to guide municipalities in contracting decisions.

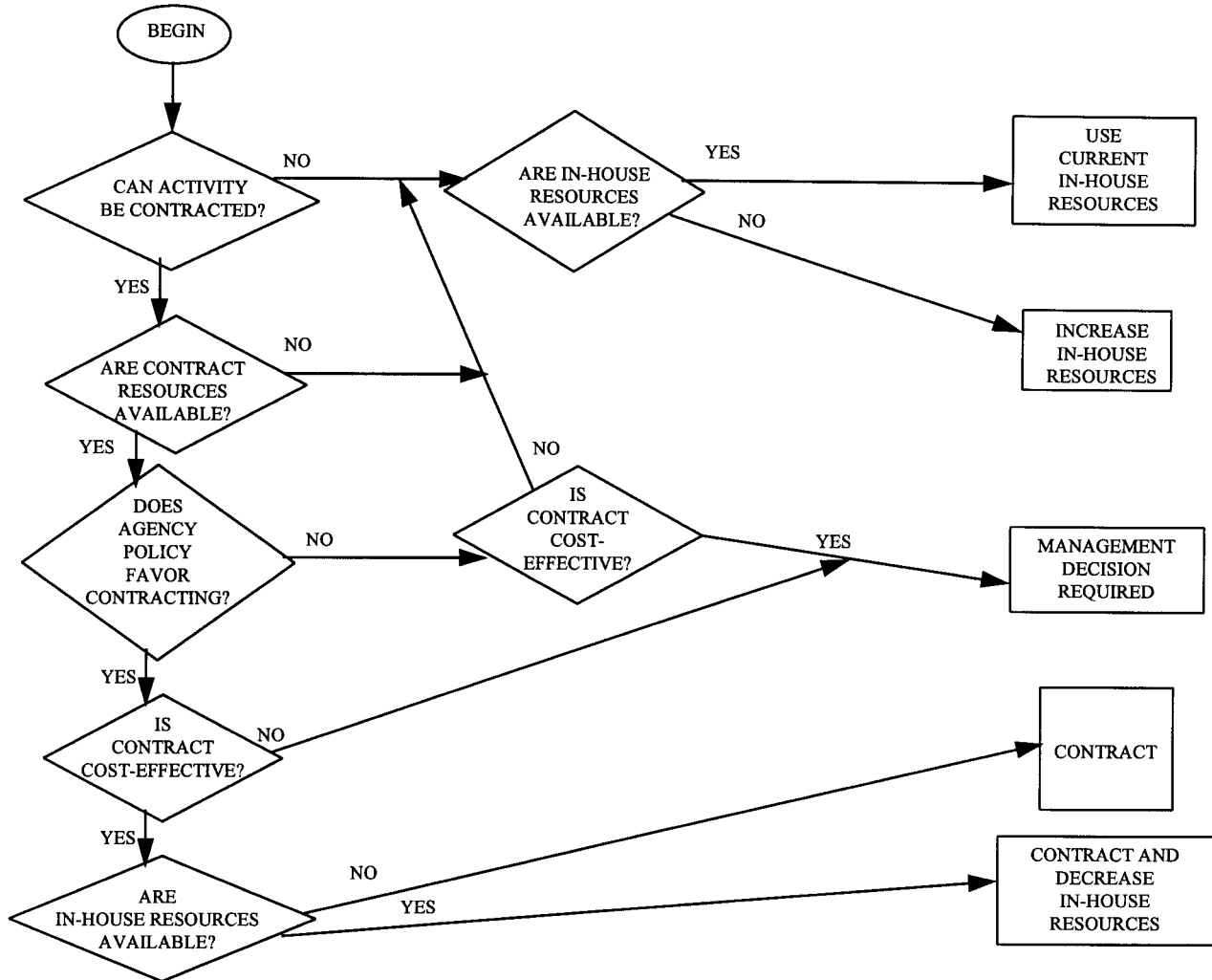
The 11 factors, (which PennDOT could, but does not specifically, apply to its own decisions) are:

1. *Availability of in-house personnel* - This is perhaps the most critical issue among municipalities. If staff limitations make it impossible to staff a municipal unit to the level required for certain activities, those activities must be contracted if they are to be accomplished.
2. *Availability of contractors* - Obviously, if the desired skills are not available commercially, the service must be performed in-house.

¹Because GWOF is applied to PE and CF only, it generally amounts to less than 1 percent of the bid price.

Exhibit 8

**Decision-to-Contract Flow Chart Prepared by PennDOT
for Local Government Use**



Source: Pennsylvania Department of Transportation *Maintenance Practices for Local Roads, Volume III - Program Administration*, June 1994.

3. *Peak workloads* - It is usually impossible to maintain sufficient staff and equipment to adequately accomplish all of the work during peak periods. In these cases, peak loads can be handled by overtime work, part-time help, seasonal hires, or contracting.
4. *Emergency services* - Municipalities have a duty to protect public safety. This duty frequently justifies maintaining in-house capabilities to meet such needs, even though it may be more expensive than contracting for

this purpose. However, some municipalities have successfully contracted for these services in part or in whole.

5. *Specialized work* - Some highly specialized work can only be accomplished by contract. For instance, the design of a new bridge will be beyond the technical capabilities of most municipalities.
6. *Specialized equipment* - As with specialized work, if an activity requires equipment that is not available in-house, it might be cost-effective to contract rather than purchase the equipment or to joint purchase the equipment with one or more other municipalities.
7. *Cost* - The comparison of contract and in-house costs is a key issue and one that is very difficult to resolve. Contract costs for some activities can usually be estimated fairly accurately, but the cost to perform in-house work is frequently underestimated. The cost of a contract includes all the overhead associated with doing business: office rental, utilities, insurance, fringe benefits, FICA, support services, and depreciation of capital assets. If the cost of providing in-house services does not include similar overhead expenses, a direct comparison is not entirely fair.
8. *Responsiveness* - Quick action or responsiveness might be an issue in some cases and not in others. For instance, materials testing is usually an activity that can be programmed well in advance, so responsiveness may not be an important issue. Snow removal, however, must begin whenever the snowfall warrants it. Responsiveness for that activity is very important.
9. *Quality of work* - When doing in-house work, the enforcement of quality standards and specifications is very difficult. A contract that requires a specific level of quality is an enforceable document that, if used properly, will help ensure that the desired quality is achieved.
10. *Labor considerations* - Public employees are protected by civil service laws and regulations that make frequent changes in employment levels difficult. On the one hand, the human impact of a decision to contract a service previously performed by in-house forces must be carefully considered. On the other hand, managers must keep in mind that if a decision is made to perform a service in-house that was previously contracted out, the increased labor force must be considered permanent.
11. *Municipal policy* - It is very helpful if the board governing the municipality establishes a policy concerning contracting services. Some municipalities favor contracting out to encourage local economic growth, while others feel it is more cost-effective to do as much work in-house as possible. This public policy issue is political in nature and is the function of the board.

PennDOT Plans to Adapt the Texas Model

In February 1996, the IMPACCT Commission² released their report entitled *Making Government Make Sense*. One of the Commission's recommendations was that PennDOT adapt an approach similar to the Texas DOT Contractibility Rating Model in determining when and how to outsource routine road maintenance work. The Commission estimated that, after five years, PennDOT could accomplish the same routine road maintenance work for \$5 million less per year. This assumed that PennDOT increased the portion of routine maintenance it contracts out from 20 to 30 percent of all maintenance and that PennDOT could attain the Texas DOT threshold of a minimum 10 percent savings. In February 1996, the Secretary of Transportation informed the Pennsylvania Transportation Advisory Committee of several initiatives to expand privatization within PennDOT, including adapting the Texas Contractibility Rating Model to Pennsylvania.

Recommendations

- 1. PennDOT should develop and implement a standard methodology for determining whether to perform maintenance work in-house or by contract. This methodology should consider cost effectiveness as well as noneconomic factors such as responsiveness, quality of work, and labor-management relations. To make this exercise meaningful, PennDOT must be willing to increase staff or purchase needed equipment if the analysis leads to the conclusion that the preferred method is to do the work in-house.**
- 2. In those areas of the Commonwealth where few qualified contractors are available, PennDOT should retain significant in-house capabilities to ensure that it has meaningful baseline cost comparison information against which to assess contractor bids and as protection against contractors inflating prices.**

²In 1995 the Governor and the General Assembly established this Commission to "study the management of current government operations [in all program areas, not just transportation] and the experience of other states in an effort to propose changes which will reduce costs, increase accountability and improve service."

FINDING A4

Highway Consulting Costs Are Escalating

Summary: Consulting costs for design engineering and other highway construction consulting services have been escalating in recent years, rising from 6.5 percent of construction and betterment costs in FY 1989-90 to 10.2 percent in FY 1994-95. Environmental and cultural impact statements, in particular, can be costly and time consuming, with some taking five to ten years to complete. Because of the long lead times required, environmental studies for complex projects often begin before funding is secured for construction. However, if there are delays in funding the construction project, the environmental study could become dated and a new study required.

As shown in Exhibits 9 and 10, from FY 1989-90 through FY 1994-95 consultant costs have increased from 6.5 percent of construction and betterment costs in FY 1989-90 to 10.2 percent in FY 1994-95. In FY 1993-94, these costs peaked at 11.5 percent of total construction and betterment costs. Consultant costs include preliminary and final engineering design work; environmental and cultural impact studies, which are part of preliminary design; and consultant work during construction.¹ Actual consultant costs were \$113.6 million in FY 1994-95 compared to \$71.6 million in FY 1989-90.

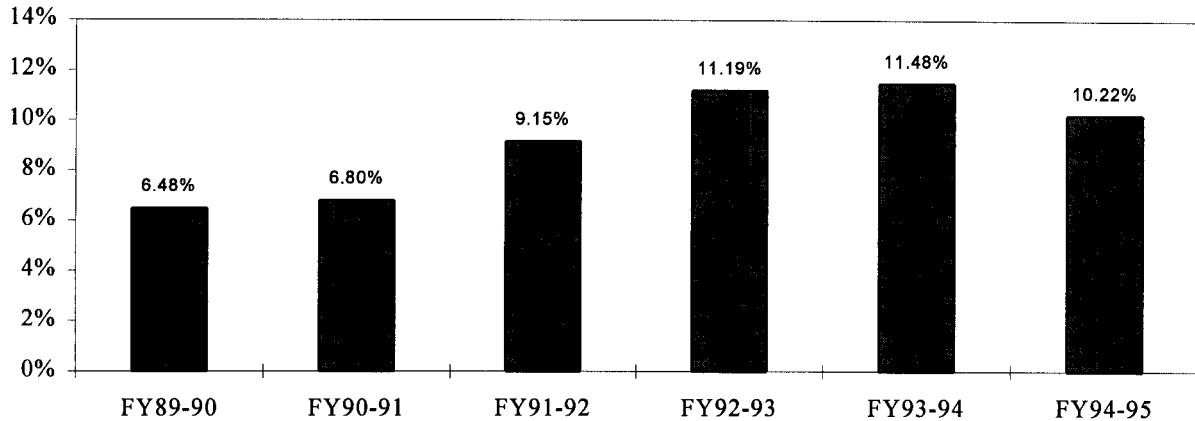
Consultant Engineering Agreements Average Slightly Over \$1 Million Each

From FY 1989-90 through March 31, 1996, PennDOT had 860 consultant agreements for design engineering services with 134 consultant engineering firms at an estimated value of \$868.3 million. These agreements ranged in cost from a low of about \$12,900 to a high of about \$45 million. The average consulting agreement was slightly over \$1 million. The \$868.3 million represents the total already paid for consultant services and, for those contracts still in progress, the amount projected to be paid, as of March 31, 1996, over the life of the contracts.

¹Consultant costs for the state bridge inspection program could not be broken out separately and are therefore also included in these sums.

Exhibit 9

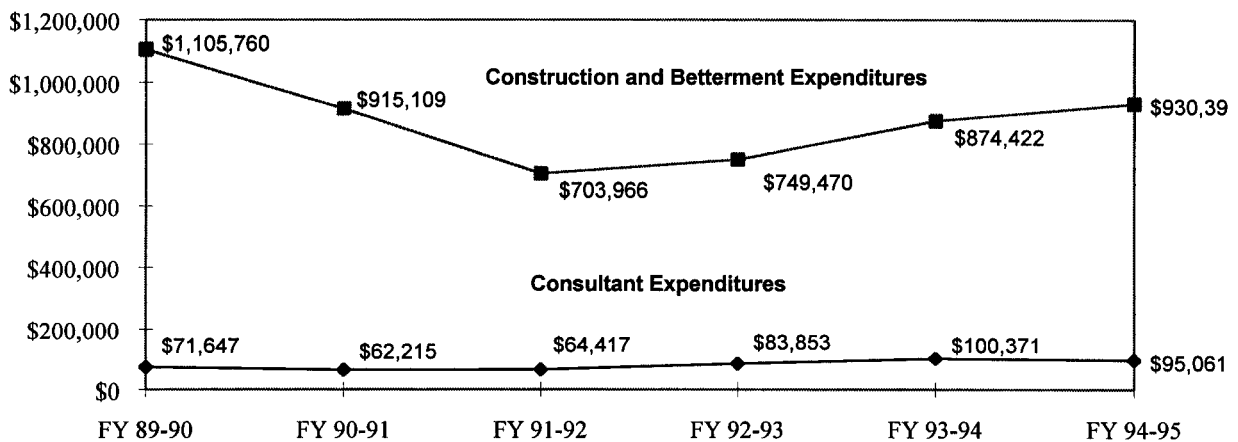
Consultant Costs as a Percentage of Total Construction and Betterment Costs



Source: Compiled from information contained in PennDOT's *District Management Summary Report*, "Number of Open Consultant Agreements vs. Engineering Contract Payments to Consultant"; the *Governor's Executive Budget*, "Department of Transportation Presentation--Program Funding Summary"; and information provided by PennDOT's Bureau of Fiscal Management.

Exhibit 10

Consultant Costs vs. Construction and Betterment Costs
(\$000's)



Source: Compiled from information contained in PennDOT's *District Management Summary Report*, "Number of Open Consultant Agreements vs. Engineering Contract Payments to Consultant"; the *Governor's Executive Budget*, "Department of Transportation Presentation--Program Funding Summary"; and information provided by PennDOT's Bureau of Fiscal Management.

The consultant engineering firms depicted in Table 8 received 23 percent of the contracts (197 of 860 agreements) and 26 percent of the awards (\$230.1 of \$868.3 million) during this period.

Table 8

**Consultant Engineering Firms to PennDOT
With the Largest Number of Agreements in Place**
(July 1, 1989 - March 31, 1996)

| <u>Contractor</u> | <u># of Projects</u> | <u>Total \$ Award</u> | <u>Avg. \$ Award Per Project</u> |
|----------------------------------|----------------------|-----------------------|--------------------------------------|
| Gannett Fleming | 35 | \$62.2M | \$1.8M |
| Michael Baker, Jr., Inc. | 34 | 39.8 | 1.2 |
| Urban Engineers, Inc. | 25 | 38.5 | 1.5 |
| Anthony Erdman, Associates | 27 | 33.6 | 1.2 |
| SAI Consulting Engineers | 39 | 33.2 | 0.9 |
| Mackin Engineering | 37 | 22.8 | 0.6 |

Source: Developed from information provided by PennDOT's Bureau of Design.

The consultant selection process, which is outlined briefly in Exhibit 11, is highly structured and intended to ensure that consultants are selected competitively based on specialized experience, technical competence, past performance, workload, location of the consultant, and other factors specific to the project. As a result, however, it can take more than nine months from the time an engineering district identifies a need for a consultant until a contract is finally executed. If additional work is required during the course of the contract, supplements to the contract can take three to six months to execute.

**Environmental and Cultural Impact Studies, in Particular,
Are Costly and Can Delay Project Startups**

For most projects, the design process takes one to two years. This includes environmental studies, preliminary and final engineering designs, and permit and right-of-way acquisition. For major highway and bridge projects, the design process can take five to ten years to complete. The Department noted that often these delays are the result of environmental and cultural impact studies that require the input and approval of other state and federal agencies, particularly the Pennsylvania Department of Environmental Protection and the U.S. Environmental Protection Agency. Approvals from the Pennsylvania Historical and Museum Commission can also create lengthy delays.

PennDOT Selection Procedures for Acquisition of Professional Engineering Services by Consultants

| <u>STEP</u> | <u>PENNDOT</u> |
|---|---|
| 1. Need and Authorization for Consultant Services | District Engineer (DE) reviews in-house workload & expertise. Submits request to Bureau of Design (BOD). |
| 2. Review of Request for Consultant Services | BOD evaluates District's justification. |
| 3. Request for Letters of Interest (LOI) | BOD advertises in Pennsylvania Bulletin. |
| 4. Review of LOIs | District Office recommends five firms ranked in order based on consultant qualifications. |
| 5. Short List Recommendation | DE presents his recommendations to the Consultant Selection Committee (CSC). CSC may add firms for consideration. |
| 6. Selection of Short List | CSC ranks firms in preferred order. Rankings are added and three firms with the lowest scores invited to submit proposals. |
| 7. Review of Technical Proposals | District Office evaluates technical proposals and ranks them for negotiation purposes. |
| 8. Final Ranking | CSC establishes the final order of rank for the purpose of negotiating an agreement. |
| 9. Price Proposal | District holds a clarification meeting with the first ranked firm and requests price proposal. |
| 10. Negotiations | BOD conducts negotiations to obtain an agreement at a fair and reasonable cost. If agreement is not reached with first ranked firm, process is repeated until agreement is reached. Contract awarded on basis of best combination of technical and price proposals. |

Source: Developed from PennDOT's Master Policy Statement #403, dated August 1, 1989.

Currently Pennsylvania has 49 environmental impact studies in various stages of completion. At least 12 of these studies are for construction projects that are now on hold due to lack of funds to proceed. Department officials noted that it has a large number of environmental impact studies underway in order to be ready should federal funds become available to begin construction. Because of the long lead times required for complex projects, the Department may place only the preliminary design phase of such a project in the top four years of the Twelve-Year Transportation Program, with the final design and construction phases being placed in the second or third four-year segments.

However, environmental impact statements are only good for three years after the FHWA gives clearance for the project to proceed into the Final Design Phase. If a project does not proceed within this three-year period, a detailed reevaluation report is required. If the FHWA does not approve the reevaluation report, a supplemental environmental impact study is required.

When the preliminary design phase begins, Department officials work with FHWA officials to determine the type of environmental study needed.² The cost of environmental impact studies vary depending upon the complexity of the project. Costs in the \$3 million to \$5 million range are typical. Projects that could affect property protected under the National Historic Preservation Act of 1966 may also require a cultural resource study. Depending on the archaeological significance of the area, investigations may proceed through three phases, each with an increasing level of detail.

Although PennDOT has estimated that these cultural resource studies annually total \$10 million to \$15 million, the typical costs for doing both historic structure studies and archeological studies are dependent on the complexity of the study. The cost range for a historic structure study is \$5,000 to \$50,000. The cost ranges for archaeological studies vary by study phase:

Phase I (archaeological investigations to provide an inventory of all archaeological resources in a project area potentially eligible for the National Register of Historic Places) - \$5,000 to \$15,000.

Phase II (investigations designed to sample the archaeological deposits at a site in order to determine eligibility for listing on the National Register) - \$50,000 to \$150,000.

Phase III (involves data recovery excavation to mitigate the adverse effects to an eligible site) - \$100,000 to \$2 million.

Steps Being Taken to Mitigate the Problems

PennDOT has begun taking steps to improve the consultant selection process and to reduce the time and cost of consultant studies.

The Bureau of Design recently completed an Engineering Computing Business Plan that focuses on evaluating the current design process and incorporating new technology which PennDOT expects will, in the long term, yield significant

²There are three classes of environmental studies: Class I, the Environmental Impact Statement, is the most rigorous. An EIS is required for projects that significantly affect the environment, that affect properties protected under the National Historic Preservation Act, and for a variety of other reasons.

savings in time and money. The Bureau is also computerizing the management of the design process in the Engineering Management System.

PennDOT meets monthly with environmental agencies and the FHWA to discuss specific projects and related policy issues. PennDOT's Bureau of Environmental Quality is developing new manuals and training programs related to the environmental clearance tasks and is attempting to streamline environmental impact statements. PennDOT and the PA Department of Environmental Protection are working to develop a reasonable wetland mitigation strategy for PennDOT projects.

The Pennsylvania Historical and Museum Commission, in cooperation with PennDOT, has a number of on-going initiatives intended to reduce the cost of cultural resource studies associated with transportation projects. Initiatives undertaken to reduce cost include: (1) a shared database project using Geographical Information Systems (GIS) technology to expedite project review, (2) completion of a statewide local bridge survey, and (3) identifying regions of Pennsylvania where adequate archaeological surveys have been completed so that new surveys would not need to be done.

FINDING A5

County Managers Have Had Only Limited Input Into County Maintenance Plans and the Allocation of Resources, but Changes Are Underway

Summary: Although county maintenance managers generally have decision-making authority over the day-to-day operations of their maintenance districts, most have little input into county maintenance plans or decisions regarding the allocation of resources. County annual work plans and budgets are largely developed at the central office and engineering district level. Personnel and equipment decisions are also highly centralized, with many county maintenance managers having little actual decision-making authority. As a result, county maintenance managers are limited in their ability to optimize resources to meet the needs of their counties.

Most modern management theories hold that as much decision-making authority as possible should be given to those employees and managers closest to the problems being faced. By decentralizing decision-making, sometimes called “employee empowerment,” organizations can improve motivation and increase creativity. We found, however, that within PennDOT’s Highway Administration deputation many decisions regarding planning, budgeting, personnel, and equipment remain highly centralized, and county maintenance managers have relatively little input into these decisions. The emphasis on centralized control appears to have been in response to problems the Department faced in the 1970s that may have legitimately called for a stronger role for the central office at that time.

We also found that quite a bit of variation exists among engineering districts, with some district engineers granting a relatively high degree of autonomy to their county maintenance managers and other district engineers retaining a more centralized approach. For this reason, it is difficult to make statements that apply equally to all maintenance districts. In general, however, most county maintenance managers believe their productivity is hampered by their lack of decision-making authority. For example, 74 percent of the county maintenance managers responding to our questionnaire reported that they could be more productive if the central and engineering district offices trusted them more to make decisions. Examples of some of the comments we received through our questionnaires and interviews are shown in Exhibit 12.

Selected Comments From County Maintenance Managers

- Decentralization of decision-making (more reliance on experience and expertise of the county organization) would translate into a real teamwork atmosphere.
- I don't believe my district office ADE-Maintenance trusts me to make decisions about priorities and workplans. We plan our operations in June for the next fiscal year and we work our plan. Sometime, though, we are compelled to get to our numbers.
- District Engineer for Maintenance mandates all work, equip. etc. with little county input. Because of the inflexibility in the program at the beginning of fiscal year does not allow more serious non-redbook items. This is a problem because district office mandates entire plan. The union has been able to become powerful enough to incorporate contract language which makes it very difficult to perform efficient and cost effective which is not in the best interest of the motoring public.
- Early part of the year is dedicated to accomplishing major work (programs) and spending most of the dollars--end of year is usually devoted to meeting the numbers on the annual work plan. More flexibility is needed to meet needs dictated by weather and other factors. More authority and latitude must be afforded by both the management at the district and central office levels. Broad guidelines with monitoring procedures and managerial responsibility for success/failure are necessary accompaniments of more authority and latitude.
- Central and District Office are concerned about the numbers game. Those of us that place our efforts on addressing needs are penalized.
- The resurfacing mileage quota has prevented us from doing the right things. We've had to schedule more seal coat than needed in order to reach our mileage goal within budget. Should have done leveling (paving), widening and shoulder upgrades.
- The central office provides good leadership and understands what goes on in the field but there is too much micro-management with priorities set by the central office.

Source: Selected comments by PennDOT county maintenance managers.

County Budgets and Maintenance Plans

As described below, county maintenance managers have little input into their budgets or their counties' annual work plans.

County Budgets

Under the Department's budgeting process, each fiscal year the Secretary of Transportation establishes guidelines for expenditures based on the Governor's fiscal guidelines and projected needs. The Bureau of Maintenance and Operations then works with the Bureau of Fiscal Management to develop budget projections for highway maintenance based on the *Roadway Needs Report*. (The *Roadway Needs Report* is based on the STAMPP survey conducted by PennDOT employees and college students; it involves no direct input from the county maintenance managers.) The budget projections are then incorporated into the Department's appropriation request. Once the Legislature has appropriated the funds, PennDOT rebudgets funds to adjust to the actual appropriation, which is then allocated to each county according to the statutory maintenance allocation formula (see Finding A2).

Once funds are allocated to a county, the county maintenance manager establishes a budget for approval by the district engineer. The extent of the autonomy the county maintenance managers have in setting these budgets varies by county. Once the budgets are approved, funds cannot be shifted between major objects of expenditure without engineering district approval. For example, county maintenance managers must obtain approval from the engineering district to shift unspent funds budgeted for winter services to road resurfacing. We were also told by two county managers that the engineering district transferred funds from one category to another, informing the county maintenance manager only after the fact.

Annual Work Plans

Maintenance district operations are driven largely by each county's annual work plan. This plan sets both road surface treatment mileage goals and goals for activities such as manual and mechanical patching, mowing, and drainage and guiderail maintenance. Although the annual work plan is the key document directing county operations, county maintenance managers may have little opportunity for formal input into the plan. Rather, the annual plans are developed by the central office and engineering district based on budgetary guidelines and quantitative data on road conditions.

Overall mileage goals for road surface improvements have been set by the Secretary of Transportation as part of the budget process. Each engineering district is assigned a share of the statewide total which it then divides among the counties in its district. The county maintenance managers then work with the district

engineer to distribute the planned mileage between oil and chipping, leveling, resurfacing, and other road surface treatments. County maintenance managers are then responsible to ensure that the targeted mileage plans are met, with attainment of these goals being a key factor in the county maintenance manager's performance evaluation.

Establishing overall surface treatment mileage goals at the central office level can have unintended consequences, especially when maintenance resources are limited. For example, 57 percent (21 of 37) of the county maintenance managers responding to our survey indicated that they agreed with the statement that "county maintenance managers schedule less important maintenance activities in the last few months before the end of the fiscal year in order to achieve goals or quotas instead of concentrating on more serious maintenance needs in categories where the goals or quotas have already been met." Forty-one percent (15 of 37) disagreed with this statement while one indicated he was "neutral" toward the statement. As stated by one county maintenance manager, "mileage goals are not in the best interest of the motoring public If a maintenance unit is only interested in meeting a goal of x miles per year, the best possible maintenance procedure might be overlooked in order to meet some mileage goal."

We reviewed county practices with regard to sealing (oil and chip treatments) and leveling as an example of how rigid goals or quotas can be counterproductive. Seal coating is a relatively inexpensive (about \$8,000 per mile) preventative treatment intended primarily to prevent water from seeping into existing cracks. Leveling is a more expensive treatment (\$20,000 per mile) intended to improve the road's structure and rideability through the application of a leveling course of asphalt. Typically a newly leveled road also receives a sealing treatment. Resurfacing, the most expensive treatment, costs about \$100,000 per mile.

Because sealing is a less expensive treatment than leveling, the annual maintenance plans appear to emphasize sealing treatments as a way to meet overall surface treatment mileage goals established at the central office. Consequently, several county maintenance managers reported that they have seal coated roads that did not warrant this treatment in order to meet annual mileage goals while other roads, which needed a leveling course, were not treated.

The Department's maintenance cycle statistics confirm that needed leveling treatments are being skipped in favor of less expensive surface sealing. During the four-year cycle ending in FY 1994-95, PennDOT averaged 5.1 years between surface seals. This exceeds its maintenance cycle goal of six years between surface seals. However, PennDOT substantially missed its maintenance cycle goal of 12 years between leveling courses. The actual average is 17.3 years. In FY 1989-90, the Department reported averaging 7.1 years between leveling courses.

Department officials report that the central office will discontinue setting specific mileage goal requirements for surface improvements. The new focus will address customer concerns about the ride quality of the roads. (District business plans identify the strategies used to optimize ride quality while addressing the need to maintain the road system.) The determination of what treatments are appropriate for which county roads will rest with the county maintenance manager and the district engineer. One district engineer stated that he believes “without mileage goal requirements, program emphasis will shift away from seal coats toward more leveling and resurfacing.”

Personnel and Equipment

County maintenance managers also have little autonomy or decision-making authority over the personnel and equipment decisions affecting their counties. The hiring, placement, and firing of the permanent and temporary personnel at the maintenance district offices are handled by the central office.¹ County maintenance managers and their management teams are responsible only for employee performance evaluations.

County maintenance managers told us, for example, of temporary equipment operators who were hired for winter maintenance work who lived over 50 miles from their assigned maintenance district stockpile or satellite office and were therefore unable to get to work during snow storms. Another reported that they had requested temporary personnel, but by the time they were hired and trained, they were no longer needed.

AFSCME contract language and grievance procedures can also impede the county maintenance managers’ ability to manage resources. For example, several county maintenance managers cited the difficulty imposed by the AFSCME rule regarding job site reporting and that highway maintenance workers cannot work on four-lane roads on Fridays. Several also noted that because the maintenance foreman is a union position, it divides the management team and hampers the county’s overall performance.

County maintenance managers also have uneven control over the equipment decisions affecting their counties. As described in Finding A9, equipment budgets are driven largely by equipment needs as determined by the engineering districts and usage reports submitted by the counties. After an appropriation is made an equipment budget is finalized for each engineering district. The engineering district then prepares an equipment budget for each of its county maintenance districts. County maintenance managers are then asked to submit their equipment purchase requests to the engineering district for approval. Thereafter, engineering

¹In its response, the Department noted that the districts have been granted authority to dismiss temporary employees.

districts vary in the extent of the modifications they make to county maintenance district equipment purchase requests.

A pilot program begun in FY 1994-95 allows county maintenance managers to use monies received from the auction of old dump trucks for additional equipment purchases. Our interviews with county maintenance managers show strong support for this new initiative.

Recommendation

- 1. The Department should explore ways to grant county maintenance managers more autonomy over how county resources are used. In particular, the Department should consider:**
 - **A bottom-up, rather than top-down, approach to building the annual work plan. (General budgetary parameters would still be prescribed.) This would allow the county maintenance managers, who presumably have the most thorough knowledge of their county's needs, direct input into the plans. The engineering districts and the central offices could retain approval authority and request explanations when county plans diverge from what would be indicated from the *Roadway Needs Report*.**
 - **Granting county maintenance managers independent authority to move budgeted monies between major objects of expenditure, perhaps subject to a dollar or percentage limit.**
 - **Requiring that engineering districts consult with county maintenance managers before transferring funds between minor (and major) objects of expenditures.**
 - **Allowing county maintenance managers discretionary authority over a small portion of their equipment budget, perhaps 10 percent, to address needs not provided for in the engineering district's equipment request.**
 - **Granting county maintenance managers the authority to hire and fire temporary personnel within reasonable limits.**

FINDING A6

13.8% of PennDOT's Maintenance Money Was Used to Support the Central and Engineering District Offices in FY 1994-95

Summary: Between FY 1989-90 and FY 1994-95, 13.5 percent of all maintenance monies (state and federal) were used to support the eleven engineering district offices and the central office. In FY 1994-95, the engineering districts and the central office expended 13.8 percent of all maintenance monies. Some of these expenditures appear to be only indirectly related to highway maintenance functions.

Highway Administration staff and programs at the engineering district and central office level are supported in part by charges to the county maintenance districts. As shown in Table 9, in FY 1994-95 total state maintenance funding was \$763.1 million. Of this amount, 14.9 percent was expended for engineering district (\$47.0 million or 6.2 percent) and central office (\$66.4 million or 8.7 percent) operations. Between FY 1989-90 and FY 1994-95, an average of 15.0 percent of all state maintenance expenditures were for engineering district (6.1 percent) and central office (8.9 percent) operations.

When federal maintenance monies are included, the percentage of total maintenance monies expended by the engineering districts and central office was 13.8 percent (5.5 percent and 8.3 percent, respectively) in FY 1994-95, up from 12.5 percent (5.0 percent and 7.5 percent, respectively) in FY 1989-90. The six year average was 13.5 percent.

For FY 1995-96, the engineering districts and central office units are budgeted to receive a combined 17.3 percent of state maintenance monies (6.0 percent and 11.3 percent, respectively). The component for central office operations alone increased by \$24.7 million from FY 1994-95 (\$66.4 million) to FY 1995-96 (\$91.1 million). Department officials attributed this increase in part to a \$7-8 million increase in the Department's equipment budget, which is funded out of the central office. The additional \$17 million increase was attributed in part to emergency funds allocated to the central office, a contingency for environmental damage at stockpiles, a new automated fuel system, and an automated mapping system for overweight trucks. According to the Department, the emergency funds are budgeted every year and are reallocated back to the counties if not spent. Therefore, the amount of maintenance funds that will ultimately be spent by the central office will not be known until after the close of the fiscal year.¹

¹Figures for estimated FY 1995-96 federal maintenance funds going to the engineering districts and central office are not available.

Table 9

Total Maintenance Funding
(\$000)

| | <u>FY 1989-90</u> | <u>FY 1992-93</u> | <u>FY 1994-95</u> | <u>FY 1995-96</u> |
|--|------------------------------------|------------------------|-----------------------|-------------------------|
| Gross Allocation..... | \$630,502 ^a | \$603,318 ^b | \$620,497 | \$680,567 |
| Hold Harmless..... | 14,879 | 17,384 | 24,596 | 5,007 |
| Act 26..... | 0 | <u>119,682</u> | <u>117,958</u> | <u>123,567</u> |
| Total State Funding..... | \$645,381 | \$740,384 | \$763,051 | \$809,141 |
| District Office Operations..... | (36,092) (5.6%) | (45,121) (6.1%) | (47,048) (6.2%) | (48,814) (6.0%) |
| Central Office Operations ^a | <u>(54,466)^a (8.4%)</u> | <u>(65,538) (8.9%)</u> | <u>(66,364) (8.7)</u> | <u>(91,089) (11.3%)</u> |
| Net State Funding to Counties..... | \$554,823 (86%) | \$629,725 (85.1%) | \$649,639 (85.1%) | \$669,238 (82.7%) |
| Federal Augmentations..... | \$127,956 | \$145,577 | \$126,229 | Not Available |
| District Office Operations..... | (2,594) | (1,966) | (1,823) | Not Available |
| Central Office Operations..... | <u>(3,889)</u> | <u>(6,385)</u> | <u>(7,239)</u> | Not Available |
| Net Augmentations to Counties..... | \$121,473 | \$137,226 | \$117,167 | |
| Total (%) Funding to Counties..... | \$676,296 (87.5%) | \$766,951 (86.6%) | \$766,806 (86.2%) | |
| Total (%) Funding to District Offices..... | \$ 38,686 (5.0%) | \$ 47,087 (5.3%) | \$ 48,871 (5.5%) | |
| Total (%) Funding to Central Office..... | \$ 58,355 (7.5%) | \$ 71,923 (8.1%) | \$ 73,603 (8.3%) | |
| Total..... | \$773,337 (100%) | \$885,961 (100%) | \$889,280 (100%) | |

^aReduced by lapse of \$13.3 million.

^bReduced by lapse of \$9 million.

Source: Developed from PennDOT Highway Maintenance Appropriation Distribution Analysis.

How Engineering District and Central Office Costs Are Allocated to the Counties

Engineering district and central office costs are allocated to the county maintenance districts based primarily on each county's proportionate share of the statewide highway maintenance allocation. For example, Crawford County received 1.71 percent of the gross allocation of the Act 68 state maintenance monies in FY 1994-95 and was assessed 1.71 percent of that year's estimated central office expenditures related to maintenance. The assessment calculation for the engineering district office is similar in that it is based on the proportion of funds a county receives relative to the total funding for the counties in the engineering district. For example, Crawford County received 19.3 percent of the Act 68 maintenance money going to the counties in Engineering District 1-0 and was therefore assessed 19.3 percent of the amount determined to be owed to that engineering district. Allocations from Act 26 and federal augmentations are calculated in the same manner. Table 10 shows the percentage of the gross allocation each county received under Act 68 and the amount and percentage paid to the engineering district and central office. Appendix C shows the total amount each county paid to the engineering district and central office from both federal and state maintenance funds.

In FY 1994-95 the central office expended \$66.4 million in county maintenance funds. The breakdown of these personnel, operating, and fixed asset costs by activity are shown in Table 11. According to a Department official, personnel costs include all such costs for the Bureau of Maintenance and Operations, some of the expenses for the Materials Testing Lab, maintenance-related planning within the Highway Administration bureaus, and some of the costs of truck weight and safety enforcement teams. Engineering district costs are mainly for activities such as project inspection, design and right-of-way costs for betterment projects, and highway occupancy permits.

The General Appropriations Act specifies that the state maintenance appropriation is "for the salaries, wages, and all necessary expenses for the administration and operation of the maintenance program for state roads, bridges, tunnels and structures, including the operation of the county maintenance district facilities." Act 1980-68 states that "highway maintenance programs are developed to offset the effects of weather, organic growth, deterioration, traffic wear, damage and vandalism. Deterioration would include the effects of aging, material failures and design and construction faults to existing State highways." Although we did not attempt to trace all these charged costs back to specific maintenance functions and activities, at least some of them--such as the truck weight and safety enforcement teams and highway occupancy permits--would appear to be only indirectly related to such highway maintenance programs.

Table 10

Act 68 Maintenance Appropriations to Counties

FY 1994-95 - \$000

| County | Gross Allocation From Act 68 | | | District Office | | Central Office | |
|--------------------------|------------------------------|---------------------------|--------------------------|-----------------|--------------------|----------------|--------------------|
| | \$ Amount | % of Statewide Allocation | % of District Allocation | \$ Amount | Actual % Allocated | \$ Amount | Actual % Allocated |
| 1-1 Crawford | \$10,591 | 1.71% | 19.31% | \$ 916 | 19.32% | \$ 1,133 | 1.71% |
| 1-2 Erie | 14,687 | 2.37 | 26.78 | 1,270 | 26.78 | 1,571 | 2.37 |
| 1-3 Forest | 2,843 | 0.46 | 5.18 | 246 | 5.19 | 304 | 0.46 |
| 1-4 Mercer | 10,133 | 1.63 | 18.47 | 876 | 18.47 | 1,084 | 1.63 |
| 1-5 Venango..... | 9,774 | 1.58 | 17.82 | 845 | 17.82 | 1,045 | 1.57 |
| 1-6 Warren | <u>6,812</u> | <u>1.10</u> | 12.42 | <u>589</u> | 12.42 | <u>729</u> | <u>1.10</u> |
| District 1-0 Total..... | \$54,840 | 8.84% | | \$ 4,742 | | \$ 5,866 | 8.84% |
| 2-1 Centre..... | \$ 8,124 | 1.31% | 16.24% | \$ 768 | 16.24% | \$ 869 | 1.31% |
| 2-2 Clearfield..... | 12,093 | 1.95 | 24.18 | 1,144 | 24.19 | 1,293 | 1.95 |
| 2-3 Clinton..... | 4,707 | 0.76 | 9.41 | 445 | 9.41 | 503 | 0.76 |
| 2-4 Cameron..... | 2,034 | 0.33 | 4.07 | 192 | 4.06 | 218 | 0.33 |
| 2-5 McKean | 5,431 | 0.88 | 10.86 | 514 | 10.87 | 581 | 0.88 |
| 2-6 Potter..... | 5,770 | 0.93 | 11.54 | 546 | 11.54 | 617 | 0.93 |
| 2-7 Mifflin..... | 3,389 | 0.55 | 6.78 | 321 | 6.79 | 362 | 0.55 |
| 2-8 Elk | 4,621 | 0.74 | 9.24 | 437 | 9.24 | 494 | 0.74 |
| 2-9 Juniata | <u>3,841</u> | <u>0.62</u> | 7.68 | <u>363</u> | 7.67 | <u>411</u> | <u>0.62</u> |
| District 2-0 Total..... | \$50,010 | 8.06% | | \$ 4,730 | | \$ 5,348 | 8.06% |
| 3-1 Columbia | \$ 6,691 | 1.08% | 11.61% | \$ 413 | 11.62% | \$ 716 | 1.08% |
| 3-2 Lycoming..... | 10,248 | 1.65 | 17.78 | 631 | 17.75 | 1,096 | 1.65 |
| 3-3 Montour..... | 2,724 | 0.44 | 4.73 | 168 | 4.73 | 291 | 0.44 |
| 3-4 Northumberland | 7,746 | 1.25 | 13.44 | 478 | 13.45 | 828 | 1.25 |
| 3-5 Snyder | 3,862 | 0.62 | 6.70 | 238 | 6.70 | 413 | 0.62 |
| 3-6 Sullivan | 3,341 | 0.54 | 5.80 | 206 | 5.80 | 357 | 0.54 |
| 3-7 Tioga..... | 8,752 | 1.41 | 15.18 | 540 | 15.19 | 936 | 1.41 |
| 3-8 Union..... | 4,076 | 0.66 | 7.07 | 251 | 7.06 | 436 | 0.66 |
| 3-9 Bradford | <u>10,196</u> | <u>1.64</u> | 17.69 | <u>629</u> | 17.70 | <u>1,090</u> | <u>1.64</u> |
| District 3-0 Total..... | \$57,636 | 9.29% | | \$ 3,554 | | \$ 6,163 | 9.29% |
| 4-2 Lackawanna | \$10,668 | 1.72% | 20.58% | \$ 843 | 20.57% | \$ 1,141 | 1.72% |
| 4-3 Luzerne | 15,082 | 2.43 | 29.09 | 1,193 | 29.11 | 1,613 | 2.43 |
| 4-4 Pike | 4,943 | 0.80 | 9.53 | 391 | 9.54 | 529 | 0.80 |
| 4-5 Susquehanna..... | 9,203 | 1.48 | 17.75 | 727 | 17.74 | 984 | 1.48 |
| 4-6 Wayne..... | 7,444 | 1.20 | 14.36 | 588 | 14.35 | 796 | 1.20 |
| 4-7 Wyoming | <u>4,501</u> | <u>0.73</u> | 8.68 | <u>356</u> | 8.69 | <u>481</u> | <u>0.72</u> |
| District 4-0 Total..... | \$51,841 | 8.35% | | \$ 4,098 | | \$ 5,544 | 8.35% |
| 5-1 Berks | \$10,617 | 1.71% | 22.10% | \$ 1,138 | 22.11% | \$ 1,136 | 1.71% |
| 5-2 Carbon..... | 6,475 | 1.04 | 13.48 | 693 | 13.47 | 693 | 1.04 |
| 5-3 Lehigh | 7,968 | 1.28 | 16.58 | 853 | 16.58 | 852 | 1.28 |
| 5-4 Monroe | 8,034 | 1.29 | 16.72 | 860 | 16.71 | 859 | 1.29 |
| 5-5 Northampton..... | 6,342 | 1.02 | 13.20 | 679 | 13.19 | 678 | 1.02 |
| 5-6 Schuylkill | <u>8,615</u> | <u>1.39</u> | 17.93 | <u>923</u> | 17.94 | <u>921</u> | <u>1.39</u> |
| District 5-0 Total..... | \$48,051 | 7.74% | | \$ 5,146 | | \$ 5,139 | 7.74% |

Table 10 (Continued)

| County | Gross Allocation From Act 68 | | | District Office | | Central Office | |
|--------------------------|------------------------------|---------------------------|--------------------------|-----------------|--------------------|----------------|--------------------|
| | \$ Amount | % of Statewide Allocation | % of District Allocation | \$ Amount | Actual % Allocated | \$ Amount | Actual % Allocated |
| 6-1 Bucks..... | \$14,571 | 2.35% | 20.60% | \$ 1,151 | 20.60% | \$ 1,558 | 2.35% |
| 6-2 Chester..... | 14,188 | 2.29 | 20.06 | 1,121 | 20.06 | 1,517 | 2.29 |
| 6-3 Delaware..... | 11,831 | 1.91 | 16.73 | 935 | 16.74 | 1,265 | 1.91 |
| 6-4 Montgomery..... | 16,085 | 2.59 | 22.74 | 1,270 | 22.73 | 1,720 | 2.59 |
| 6-5 Philadelphia..... | <u>14,054</u> | <u>2.26</u> | 19.87 | <u>1,110</u> | 19.87 | <u>1,503</u> | <u>2.26</u> |
| District 6-0 Total..... | \$70,729 | 11.40% | | \$ 5,587 | | \$ 7,563 | 11.40% |
| 8-1 Adams..... | \$ 7,122 | 1.15% | 10.02% | \$ 389 | 10.03% | \$ 762 | 1.15% |
| 8-2 Cumberland..... | 7,794 | 1.26 | 10.97 | 425 | 10.96 | 834 | 1.26 |
| 8-3 Franklin..... | 8,139 | 1.31 | 11.45 | 444 | 11.45 | 870 | 1.31 |
| 8-4 York..... | 13,288 | 2.14 | 18.70 | 725 | 18.70 | 1,421 | 2.14 |
| 8-5 Dauphin..... | 8,870 | 1.43 | 12.48 | 484 | 12.48 | 949 | 1.43 |
| 8-7 Lancaster..... | 14,864 | 2.40 | 20.92 | 811 | 20.92 | 1,590 | 2.40 |
| 8-8 Lebanon..... | 5,982 | 0.96 | 8.42 | 326 | 8.41 | 640 | 0.96 |
| 8-9 Perry..... | <u>5,002</u> | <u>0.81</u> | 7.04 | <u>273</u> | 7.04 | <u>535</u> | <u>0.81</u> |
| District 8-0 Total..... | \$ 71,061 | 11.45% | | \$ 3,877 | | \$ 7,601 | 11.45% |
| 9-1 Bedford..... | \$ 7,740 | 1.25% | 16.88% | \$ 565 | 16.87% | \$ 828 | 1.25% |
| 9-2 Blair..... | 6,027 | 0.97 | 13.14 | 440 | 13.14 | 645 | 0.97 |
| 9-3 Cambria..... | 11,004 | 1.77 | 24.00 | 804 | 24.01 | 1,177 | 1.77 |
| 9-4 Fulton..... | 4,109 | 0.66 | 8.96 | 300 | 8.96 | 439 | 0.66 |
| 9-5 Huntingdon..... | 5,767 | 0.93 | 12.58 | 421 | 12.57 | 617 | 0.93 |
| 9-7 Somerset..... | <u>11,209</u> | <u>1.81</u> | 24.44 | <u>819</u> | 24.46 | <u>1,199</u> | <u>1.81</u> |
| District 9-0 Total..... | \$ 45,856 | 7.39% | | \$ 3,349 | | \$ 4,905 | 7.39% |
| 10-1 Armstrong..... | \$ 8,555 | 1.38% | 18.03% | \$ 630 | 18.04% | 915 | 1.38% |
| 10-2 Butler..... | 10,431 | 1.68 | 21.98 | 768 | 21.99 | 1,116 | 1.68 |
| 10-3 Clarion..... | 7,612 | 1.23 | 16.04 | 560 | 16.03 | 814 | 1.23 |
| 10-4 Indiana..... | 12,479 | 2.01 | 26.30 | 918 | 26.28 | 1,335 | 2.01 |
| 10-5 Jefferson..... | <u>8,377</u> | <u>1.35</u> | 17.65 | <u>617</u> | 17.66 | <u>896</u> | <u>1.35</u> |
| District 10-0 Total..... | \$ 47,454 | 7.65% | | \$ 3,493 | | 5,076 | 7.65% |
| 11-1 Allegheny..... | \$ 48,814 | 7.87% | 74.50% | \$ 3,325 | 74.50% | \$5,223 | 7.87% |
| 11-2 Beaver..... | 10,511 | 1.69 | 16.04 | 716 | 16.04 | 1,124 | 1.69 |
| 11-4 Lawrence..... | <u>6,194</u> | <u>1.00</u> | 9.45 | <u>422</u> | 9.46 | <u>662</u> | <u>1.00</u> |
| District 11-0 Total..... | \$ 65,519 | 10.56% | | \$ 4,463 | | \$ 7,009 | 10.56% |
| 12-1 Fayette..... | \$ 11,994 | 1.93% | 20.86% | \$ 836 | 20.85% | \$ 1,283 | 1.93% |
| 12-2 Greene..... | 10,181 | 1.64 | 17.71 | 710 | 17.71 | 1,089 | 1.64 |
| 12-4 Washington..... | 17,748 | 2.86 | 30.87 | 1,237 | 30.86 | 1,898 | 2.86 |
| 12-5 Westmoreland..... | <u>17,577</u> | <u>2.83</u> | 30.57 | <u>1,226</u> | 30.58 | <u>1,880</u> | <u>2.83</u> |
| District 12-0 Total..... | \$ 57,500 | 9.27% | | \$ 4,009 | | \$ 6,150 | 9.27% |
| State Total..... | \$620,497 | | | \$47,048 | | \$66,364 | |

Source: Developed from PennDOT Highway Maintenance Appropriation Distribution Analysis.

Table 11

**Distribution of FY 1994-95 Highway Maintenance Appropriation
Central Office Costs
State Funds Only (\$Million)**

| | | |
|--|------------|-------------|
| <u>Personnel Costs:</u> | | |
| Total Personnel Costs (All Central Offices)..... | | \$16.4 |
| <u>Operating Costs:</u> | | |
| Keep PA Beautiful Program..... | \$ 0.6 | |
| BIS Mainframe Computer Support..... | 3.4 | |
| Commonwealth Service Billings | 4.1 | |
| Underground Tank Replacement..... | 1.2 | |
| Auto Permit Routing/Analysis System (APRAS)..... | 0.7 | |
| Consultant Bridge Inspection (NBIS & Scour)..... | 0.5 | |
| Bulk Audit Costs | 0.5 | |
| Fleet Insurance..... | 0.7 | |
| Master Lease Program Interest..... | 0.9 | |
| Equipment Fuels & Repair Parts | 4.6 | |
| Misc. Garage & Shop Tools | 0.5 | |
| Central Garage Building Maintenance | 0.3 | |
| Environmental Concerns..... | 1.4 | |
| Roadside Rest Area Maintenance | 6.5 | |
| Sign Materials | 0.5 | |
| Other Operating Costs | <u>2.5</u> | |
| Total Operating Costs | | 28.9 |
| <u>Fixed Assets:</u> | | |
| Highway Equipment - MLP & Installments..... | \$ 7.2 | |
| Highway Equipment - Direct Purchases | 11.2 | |
| BIS - AT Equipment Costs | 0.8 | |
| APRAS - AT Equipment Costs | 1.0 | |
| Other Fixed Asset Costs..... | <u>0.9</u> | |
| Total Fixed Asset Costs..... | | <u>21.1</u> |
| Total Central Office State Fund Costs | | \$66.4 |

Source: Pennsylvania Department of Transportation Bureau of Fiscal Management.

PMO Positions Have Been Declining

As shown in Table 12, the number of filled PennDOT highway maintenance worker positions, also known as PMO (permanent maintenance organization) positions, decreased from 6,041 in FY 1989-90 to 5,777 in FY 1994-95, a decline of 4.4 percent. The PMO positions are the crew foremen, equipment operators, and laborers who do the Department's noncontracted highway maintenance work. The number of positions at engineering district offices also decreased during this period from 3,116 to 3,023, a decline of 3.0 percent. However, the number of Highway Administration positions at the central office increased from 596 to 639, a 7.2 percent increase.

Table 12

PMO, Engineering District and Highway Administration Central Office Filled Positions

| <u>Personnel</u> | <u>FY89-90</u> | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Department Total..... | 12,270 | 11,754 | 11,949 | 12,252 | 12,477 | 12,204 |
| County PMOs | 6,041 | 5,764 | 5,833 | 5,881 | 5,882 | 5,777 |
| County NonPMOs | <u>732</u> | <u>712</u> | <u>727</u> | <u>749</u> | <u>757</u> | <u>738</u> |
| Subtotal County | 6,773 | 6,476 | 6,560 | 6,630 | 6,639 | 6,515 |
| Engineering District..... | 3,116 | 2,967 | 2,929 | 2,994 | 3,110 | 3,023 |
| Central Office | <u>596</u> | <u>570</u> | <u>553</u> | <u>640</u> | <u>666</u> | <u>639</u> |
| Total Highway Admin. | 10,485 | 10,013 | 10,042 | 10,264 | 10,415 | 10,177 |

Source: Developed from PennDOT's *Personnel Strength and Activity Report* and the *County Complement Report*, FY 1989-90 to FY 1994-95.

As shown in the table, much of the increase in Highway Administration central office positions occurred in FY 1992-93. In this year, 66 employees were transferred from the Safety Administration deputate to the Bureau of Highway Safety and Traffic Engineering within the Highway Administration deputate, accounting for three-quarters of the staff increase in that year.

Recommendation

- 1. The Department should review the charges made by the central office and engineering districts to county maintenance districts to ensure they clearly and reasonably relate to highway maintenance functions. The Department should report the results of this review to the Transportation Committees of the Senate and the House of Representatives.**

FINDING A7

Some Supervisors at the Central and Engineering District Offices Have Narrow Spans of Control Resulting in Unnecessary Layers of Management

Summary: Our review of three of the Department's 11 engineering districts found 18 instances of 1:1 reporting relationships and 11 instances of 1:2 reporting relationships. Within the Highway Administration's five central office bureaus we found 29 instances of 1:1 reporting relationships and 21 instances of 1:2 reporting relationships. Such narrow spans of control can create inefficiencies and redundant layers of management. We estimate the Commonwealth would save approximately \$5 million annually if the Highway Administration deputate eliminated all such 1:1 reporting relationships at the engineering districts and central office bureaus.

As of June 30, 1995, PennDOT's 11 engineering districts had 3,023 employees, 43.6 percent of whom were in positions classified as management or supervisory positions. At the central office, the Highway Administration deputate employed 639 as of June 30, 1995, 42.9 percent of which were classified as management or supervisory positions. (Management level employees include all employees above the first level of supervision and individuals who are involved directly in the determination or implementation of policy. Supervisory positions are positions in which the employee can exercise independent judgment over personnel matters involving other employees, such as in promotion or discipline.)

Because of what appeared to be a high percentage of management and supervisory positions, we examined the span of control and layers of management within the engineering district and the Highway Administration's central office staff.

Engineering District Offices

We examined the organization of three engineering districts, District 4-0 (in Dunmore, Lackawanna County), 10-0 (in Indiana, Indiana County) and 12-0 (in Uniontown, Fayette County). These three districts employed a total of 726 employees (259, 236, and 231, respectively), or 24 percent of all engineering district personnel. These were the only three districts that had organizational charts with sufficient detail to allow us to determine spans of control and the number of layers of management within the district office.

In these three engineering districts we found 18 instances of a 1:1 reporting relationship and 11 instances of a 1:2 reporting relationship. Stated differently, we found 18 instances in which an engineering district employee was supervising only one professional employee and 11 instances in which an engineering district employee was supervising only two professional employees.¹ Exhibit 13 shows an example of two such reporting relationships and how these two positions could be combined into one supervisory position with a 1:3 span of control.

Appropriate spans of control vary depending on the type of work being done, with larger spans of control being appropriate for jobs involving repetitive tasks and narrower spans of control for jobs involving more complex tasks. The Commonwealth's Improve Management Performance and Cost Control Task Force (IMPACCT) report issued in February 1996 recommended spans of control of up to one manager per ten staff, with a one to five ratio for highly technical, policy, sensitive, and/or nonrepetitive functions. KPMG Peat Marwick, in a December 1992 study of the North Carolina Department of Transportation's field operations, characterized a span of control of three to five as being narrow.

We also examined the number of layers of management at the three engineering districts whose organizational charts were detailed enough to allow this analysis. We found 32 instances where five layers of management existed between a professional employee and the district engineer and 23 instances of six or more layers of management between an employee and the district engineer. Such multiple layers of management can create uncertainties, inefficiencies, and redundancies within an organization.

We estimated that if all 18 one-to-one reporting relationships were eliminated, PennDOT would save approximately \$940,000.² Assuming the remaining eight engineering districts are similarly structured, total engineering district savings from eliminating all 1:1 reporting relationships would be about \$3.4 million. Eliminating all 1:1 reporting relationships might also result in eliminating many 1:2 reporting relationships as positions are consolidated (see Exhibit 13).

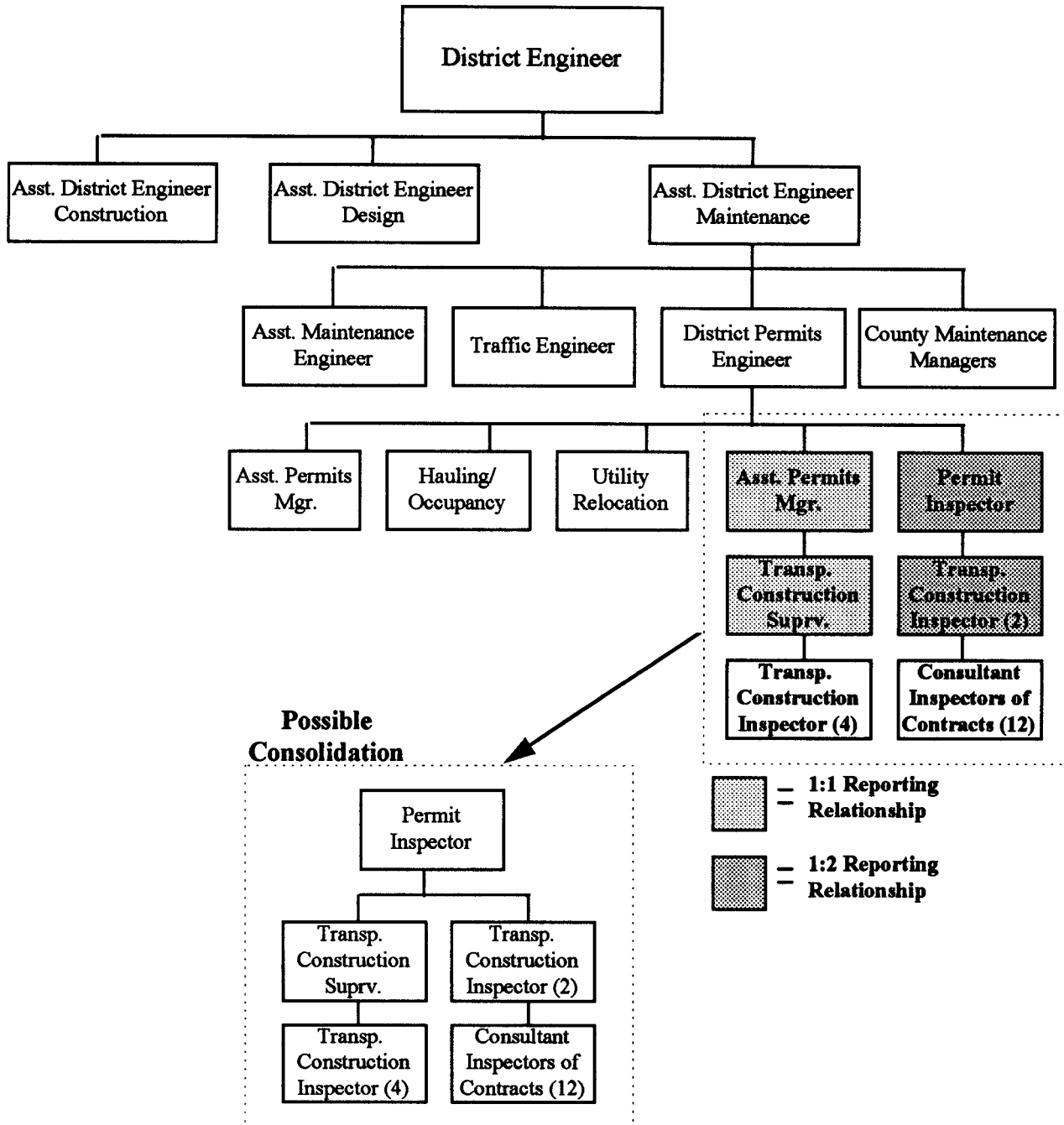
Highway Administration Central Office

We also reviewed the span of control and number of layers of management within the Highway Administration depute's five central office bureaus. Within these bureaus, we found 29 instances of a 1:1 and 21 instances of a 1:2 span of control over a professional position. We were also able to identify 38 instances of seven or more layers of management between a professional employee and the Secretary of Transportation.

¹We did not include reporting relationships involving "nonprofessional" employees, such as one secretary reporting to one manager.

²Based on salary of \$36,969 with benefits totaling 41.1 percent of salary, for total compensation of \$52,163 per position.

Example of 1:1 and 1:2 Reporting Relationship



Source: Developed from District 4-0 organizational chart.

Using the same salary and benefit assumptions as for the engineering districts, we estimated that these five bureaus could save an additional \$1.5 million by eliminating all its 1:1 reporting relationships. As in the engineering districts, this should also result in streamlining the layers of management at the central office.

Recommendation

- 1. PennDOT should review its organizational structure with the goal of eliminating all 1:1 and 1:2 reporting relationships.**

FINDING A8

PennDOT Expended Over \$162 Million for Winter Services and Pothole Repairs in 1996; Winter-Related Damages Are Estimated at an Additional \$145 Million

Summary: Snow removal and other winter services cost over \$142 million during the winter of 1995-96. Winter and spring pothole repairs, through April, cost an additional \$24 million. The snow, ice floes, and flooding in the winter of 1995-96 caused an additional estimated \$145 million in damages to PennDOT-maintained roadways and bridges. PennDOT responded to the emergency conditions by using new winter services technology; by redeploying work crews from less affected counties; and by instituting emergency contracting procedures. PennDOT has imposed a hiring freeze and delayed spring maintenance to redirect resources to meet the needs created by this winter's storms and floods.

The winter of 1995-96 was particularly harsh throughout the Commonwealth. Across the state snowfall averages were between 60" to 130", which is about 36 percent more snowfall than in a typical winter. In January, after five moderate to heavy snowfalls, rain and ice storms lead to major flooding in most of Pennsylvania's counties.

Winter 1996 Expenditures and Federal Disaster Relief

As of April 9, 1996, the Department had spent an estimated \$142 million in snow removal, salt and anti-skid materials, and other winter-related maintenance activities. PennDOT estimates that an additional \$145 million in repairs are needed because of snow, ice, and flood damage.¹ The flooding damaged approximately 1,000 bridges, including 56 that had to be closed. Over 1,400 miles of roadway were damaged.

As of late May 1996, PennDOT had commitments of \$21 million in disaster-related aid from the Federal Highway Administration (FHWA) for federal-aid highways and about \$10 million for road and bridge damages from the Federal Emergency Management Agency (FEMA).

To respond to the winter conditions, the Department redeployed about 100 employees and 50 pieces of equipment from northwest and west central to southeast

¹As of April 30, 1996, \$51 million of the estimated \$145 million for needed repairs was expended.

Pennsylvania to assist in snow removal and incurred about \$15.5 million in over-time expenses.

PennDOT had about 500,000 tons of salt and 1.2 million tons of anti-skid material on hand at the beginning of the winter. By the time winter had ended, it had used 963,000 tons of salt and 1.3 million tons of anti-skid material at a cost of about \$36 per ton for salt and \$8 per ton for anti-skid material.

To apply the salt and anti-skid material more efficiently, PennDOT accelerated field use of the "AS2" spreader system. This system uses a computer to adjust the material discharge depending on the speed of the truck. The new system could not be retrofitted onto old trucks, but is installed on the new trucks. PennDOT also tested a "zero-velocity" spreader system in York, Chester, and Luzerne counties. Both of these systems increase the speed of PennDOT salt and anti-skid operations and decrease the amount of waste that can occur from over-application or spillage.

PennDOT's Harrisburg-based communications center collected real-time road and weather condition information from 19 sites across the state. Each site monitors pavement temperature, air temperature, dew point, wind speed and direction, visibility, and the type of precipitation falling. The Department noted that this information was valuable in responding to the varying winter storm conditions.

PennDOT's Spring Pothole Patching Efforts

PennDOT, through April 30, 1996, expended \$24 million on winter and spring pothole repairs. The Department opened its pothole hotline one month earlier than normal. As of May 15, 1996, the Department had received 4,326 calls to the hotline. As shown in Table 13, this is about 1,000 fewer calls than during the last harsh winter, the winter of 1993-94. Because the pothole hotline was opened so early, the average number of pothole complaint calls per week is actually about the same as last winter.

Table 13

Pothole Complaint Hotline Statistics

(As of May 15, 1996)

| <u>Year</u> | <u># of Weeks Hotline Open</u> | <u># of Pothole Complaints</u> | <u>Avg. Complaints Per Week</u> |
|-------------|------------------------------------|------------------------------------|-------------------------------------|
| 1993 | 5 | 4,533 | 907 |
| 1994 | 5 | 5,574 | 1,115 |
| 1995 | 4 | 1,213 | 303 |
| 1996 | 14 | 4,326 | 309 |

Source: PennDOT's Office of Public Affairs.

PennDOT, like most state highway departments, repairs potholes using three different techniques: cold patch, hot patch, and warm spray mix. The cold patch is a combination of either stone or synthetic resin and a fiber binding material. It is used as a quick, temporary repair until a more permanent repair can be made with hot patch or a warm spray mix.² Hot patch is hot asphalt. Warm spray mix is a liquid emulsion of asphalt and stone which is applied with a machine (on a towed trailer or mounted on a modified truck) and sprayed into a pothole. Cold patch repairs may last only a few days or weeks. However, neither hot patch nor warm spray mix can be applied until the temperature of the road surface is 40° and rising. For this reason, the plants that manufacture hot mix typically do not open until late March or, in the colder regions of the Commonwealth, early to mid-April.

PennDOT's *Maintenance Manual* requires five to seven employees to perform manual pothole patching. This includes one to two equipment operators, two safety personnel, one to two to perform the repair, and one supervisor. Some have noted that a five- to seven-person crew seems excessive, particularly when only one or two workers are actually engaged in filling potholes. We contacted the state departments of transportation in New York, Ohio, and Illinois to determine the average size of their pothole crews and found they all used crews of about five to seven workers when doing manual patches. We also spoke to several county maintenance managers, all of whom believed crew sizes of five to seven were reasonable and necessary to provide for safe operations.

We found that the Department does about an equal amount of manual and spray patching. PennDOT's Activity Production report indicates that spray patching is 86 percent faster and 73 percent cheaper than labor-intensive manual patching. However, spray patching reportedly does not last as long as hot patch and is more suited to smaller potholes. Large potholes are therefore typically filled using the manual hot patch method.

PennDOT Has Delayed Spring Maintenance to Perform Permanent Repairs to Flood Damaged Roads

Rains and an unusual temperature increase sustained over several days in late January 1996 resulted in a rapid melt of nearly three feet of on-the-ground snow. This created ice floes and severe flooding in the rivers and streams throughout Pennsylvania. Homes, businesses, and transportation and other infrastructure were damaged. Unlike most floods, which occur in spring or summer, the floods of 1996 occurred during the winter, which meant that the Department had to cope with both flood damage and winter operations at the same time. To address this

²The term "permanent repair," although widely used in the transportation industry to describe post-winter pothole patches, is something of a misnomer. It merely means that the repair is expected to last at least until the following winter.

problem, PennDOT hired 127 contractors, at a cost of \$38.3 million, to make emergency repairs to the roads and bridges and to provide additional equipment.

To facilitate the awarding of these contracts, the Governor suspended the normal competitive bidding process.³ The emergency contracts addressed immediate safety concerns, such as filling in washed out ditches along the roadside. A second round of contracts were then awarded to make more permanent repairs. This second round of contracts was competitively bid or, in a few cases, the repairs were handled by PennDOT forces.

We spoke with several county maintenance managers who concurred with the need to supplement Department staff with the emergency contracts. We also found that the federal government requires that repairs must be made within the first 180 days after an emergency to qualify for certain types of reimbursement, which placed additional pressure on the Department to respond quickly.

After the flooding, PennDOT inspected 9,360 state and local bridges and closed, repaired, and re-opened 12 bridges. To assist Pennsylvania municipalities in coping with their damages, the Department also authorized all \$208 million in state liquid fuels tax revenue distribution grants for early release to local governments. PennDOT has implemented a hiring freeze and redirected \$30 million in unspent spring maintenance funds and the entire \$61 million from a previously planned expansion of the 1996 summer repaving program to meet flood repair needs. The Department has also delayed awarding 60 roadway maintenance contracts that had already been bid until after the start of the new fiscal year.

³At least one of PennDOT's 11 engineering districts competitively selected emergency contractors on an expedited basis using telephone bids.

FINDING A9

Much of PennDOT's Major Equipment Has Exceeded Its Expected Useful Life

Summary: Several county maintenance managers cited the lack of equipment or outdated equipment as inhibiting their ability to perform work in a timely manner. We found that, on average, 25 percent of PennDOT's major categories of equipment (e.g., dump trucks, loaders, backhoes, excavators, and graders) have exceeded their expected life. To better address its equipment needs, PennDOT increased its equipment budget from \$18 million in FY 1994-95 to \$24 million in FY 1995-96.

Of the 38 county maintenance managers who responded to our questionnaire, 26 (68 percent) agreed or strongly agreed with the statement that "my county maintenance district has the equipment we need to perform our work in a timely manner" while 11 (29 percent) disagreed or strongly disagreed with the statement. Many questionnaires also contained comments regarding a lack of equipment or outdated equipment that needs to be replaced, including:

- Key pieces of equipment are past useful life.
- More money is needed for equipment purchases; it is difficult to buy innovative equipment with the available monies.
- Need larger excavating equipment (backhoes, track loaders, milling machine).
- County's share of equipment budget does not allow for timely replacement, consequently down time is experienced along with high repair costs.
- We have equipment needed but specialized equipment is old (chipper, oil distributor, tractors).
- Specialized equipment is old and outdated (paver, postpounder, etc.). Dump truck fleet is aging, but we have embarked on a program to replace these pieces. Not enough money available to replace specialized pieces.
- Equipment is a liability to productivity.
- Our response to complaints could be expedited with additional equipment since our county performs high levels of in-house paving, widening, and seal coats.

We found that, as of March 1996, 25 percent of PennDOT's major classes of equipment (dump trucks, loaders, graders, backhoes, and excavators) had exceeded their expected useful life. More specifically, 29 percent of PennDOT's trucks had exceeded their estimated useful life as had 24 percent of winter equipment, 35

percent of road maintenance equipment, 41 percent of earth moving equipment, and 65 percent of vegetation control equipment.¹

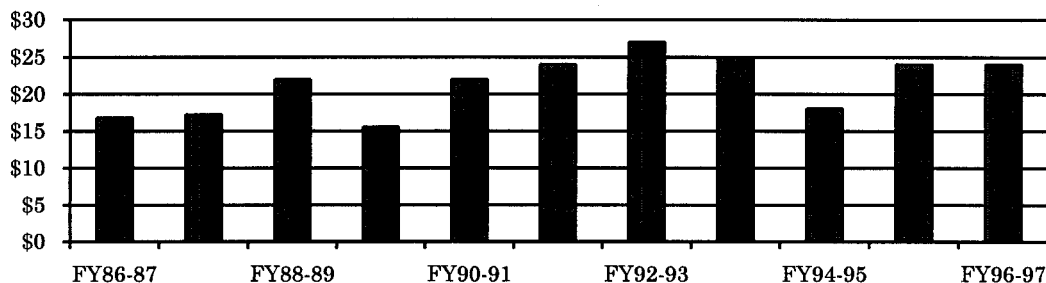
In FY 1994-95 PennDOT's equipment fleet totaled over 23,500 pieces, including over 2,200 dump trucks and more than 1,700 pieces of road surface maintenance equipment. PennDOT estimated it would require more than \$750 million to replace this equipment fleet. On average, PennDOT purchases about 1,200 pieces of new equipment each year. In FY 1995-96 the Department planned to purchase 1,008 pieces of new equipment.

PennDOT's Equipment Budget

Each year PennDOT identifies the amount available for its equipment budget.² Over the past 10 years the equipment budget has varied from a low of \$15.5 million in FY 1989-90 to a high of \$27.0 million in FY 1992-93. The planned budget for FY 1996-97 is \$24.0 million (see Exhibit 14).

Exhibit 14

PennDOT's Equipment Budget (\$ Millions)



Source: Developed from information provided by PennDOT's Equipment Division.

PennDOT determines which pieces of new equipment to purchase with input from the maintenance districts. The county maintenance manager develops a list of desired new equipment which is then reviewed and, if necessary, modified at the engineering district level. The equipment division in the central office handles the bidding and purchasing process.

Engineering districts receive an equipment allocation based on a formula that considers their equipment fleet needs and the annual usage of the major

¹See also the performance measure on page 215.

²The equipment budget is part of the Highway Maintenance Appropriation.

equipment types. The total number of pieces of equipment the engineering district reports it needs is divided by the expected life of that equipment type to determine the optimal number of units that should be replaced each year. The number of units estimated as needing to be replaced is multiplied by the estimated unit cost for each of the major equipment types to determine the total equipment needs for the engineering district.

Each engineering district's needs are then compared to total statewide equipment needs to determine the percentage of available funds to be allocated to the engineering district. For example, for FY 1996-97 over \$32 million in equipment needs were identified by the engineering districts but only \$24 million is planned for the capital equipment budget. This \$24 million would be divided among the engineering districts based on the percentages shown on Table 14.

Table 14

Capital Equipment Budget Allocation

FY 1996-97

| <u>Engineering District</u> | <u>Calculated Needs</u> | <u>Needs as % of Dept. Needs</u> | <u>FY 1996-97 Allocation</u> | <u>Alloc. as % of Dept. Total</u> |
|-----------------------------|-------------------------|----------------------------------|------------------------------|-----------------------------------|
| District 1-0..... | \$ 3,125,601 | 9.73% | \$ 2,335,200 | 9.73% |
| District 2-0..... | 3,241,379 | 10.09 | 2,421,600 | 10.09 |
| District 3-0..... | 3,452,778 | 10.75 | 2,580,000 | 10.75 |
| District 4-0..... | 2,829,798 | 8.81 | 2,114,400 | 8.81 |
| District 5-0..... | 2,597,825 | 8.08 | 1,939,200 | 8.08 |
| District 6-0..... | 2,273,982 | 7.08 | 1,699,200 | 7.08 |
| District 8-0..... | 3,691,135 | 11.49 | 2,757,600 | 11.49 |
| District 9-0..... | 3,311,459 | 10.31 | 2,474,400 | 10.31 |
| District 10-0..... | 2,928,470 | 9.12 | 2,188,800 | 9.12 |
| District 11-0..... | 1,818,419 | 5.66 | 1,358,400 | 5.66 |
| District 12-0..... | <u>2,853,547</u> | <u>8.88</u> | <u>2,131,200</u> | <u>8.88</u> |
| Dept. Total..... | \$32,124,393 | 100.00% | \$24,000,000 | 100.00% |

Source: Compiled from information provided by PennDOT's Equipment Division.

The engineering districts then divide their allotments among the counties in their district. The method of determining each county's equipment budget varies by engineering district but is based on a formula that considers similar factors. These include the number of pieces of equipment and the annual usage hours of the major equipment types.

Counties may also spend up to a set dollar amount of their maintenance allocation for equipment purchases each year. The Department sets a statewide maximum (\$4 million for FY 1996-97) and each county's allowable amount is based on

the same percentage as the equipment budget. For example, District 1-0 could spend up to 9.73 percent of the \$4 million available in FY 1996-97, or \$389,200, for equipment purchases.

Efforts to Stretch the Equipment Budget

Although a unit beyond its expected life does not necessarily need to be replaced (e.g., older dump trucks can serve as “shadow” vehicles), equipment that has exceeded its economically useful life can be costly to maintain and, if breakdowns are frequent, can impair the efficiency of maintenance operations. However, to replace all of PennDOT’s equipment that has exceeded its expected useful life would cost \$150 million or more, which would be monies not available for highway repairs. The Department has therefore implemented several programs to stretch its equipment budget.

One such program is the refurbishment program. The goal of refurbishment is to make rebuilt equipment look and perform like new. Trucks are stripped to the frame and a new cab and bed is installed. The engine, transmission, springs or other mechanical parts may be changed depending on the condition of the truck. Although most of the refurbishing work is performed by an outside vendor, PennDOT stocks rebuilt engines which are used for this program as well as for emergency repairs.

Equipment is considered as a candidate for the refurbishing program if:

- the cost does not exceed 45-50 percent of a new unit;
- the completed unit satisfies today’s and tomorrow’s needs;
- the completed unit approaches the life expectancy of a new unit; and
- the operator is satisfied with the refurbished unit.

PennDOT can rebuild a typical single axle dump truck for about \$24,000 while a new truck costs about \$65,000. PennDOT expects to gain an additional seven years of service from their refurbished trucks. Although the primary candidates for refurbishment are PennDOT’s dump trucks, other types of equipment are also considered. PennDOT has rebuilt rollers, tractors, belt-loaders, and other pieces of equipment through this program.

Since this program began in FY 1986-87, PennDOT has rebuilt 697 pieces of equipment at an estimated savings of almost \$28 million. In FY 1994-95 PennDOT refurbished 19 tandem dump trucks, 72 single axle dump trucks, 4 belt loaders, and 1 tractor at estimated savings of about \$3.4 million.

The Department also reports that it has an aggressive preventive maintenance program, with some maintenance activities being performed more frequently

than specified by the manufacturer. Compliance with the program is monitored through Preventive Maintenance/Quality Assurance Reviews (PM/QAs). Less than five percent of the PM/QA reviews done in FY 1994-95 received an unsatisfactory rating. The Department credits its preventive maintenance program as one of the reasons why, even though two of the past three winters have been the severest winters in years, it reports having experienced virtually no equipment problems during those winters.

As part of a pilot project begun in FY 1994-95, counties may also use monies received from the auction of dump trucks for additional equipment purchases. This program is being expanded, and in FY 1995-96 ten counties received \$809,800 in additional funding for equipment purchases.

Several costly and less intensively used pieces of equipment are purchased by the engineering districts and made available to their respective counties on a sequential basis during the usage season.

Another way PennDOT can provide necessary equipment is for counties to borrow equipment from other counties. Such a transfer is generally coordinated by the county equipment managers through the engineering district equipment manager and tracked through PennDOT's computerized Maintenance Operations Resource Information System (MORIS). An example would be an asphalt paving machine used in one county during the month of June and then transferred to another county for the month of July.

We found that the borrowing of equipment between counties is a common practice, but it is generally done on a short-term basis. Equipment can also be purchased by one county but stored and used in another county on a long-term basis. This can happen for several reasons, including the lack of adequate storage facilities at the county that purchased the equipment or the lack of trained personnel on a particular piece of equipment in the purchasing county's district.

When a county borrows a piece of equipment from another county, the maintenance costs and usage hours are charged to the county actually using the piece of equipment. PennDOT does not, however, attempt to reimburse the county that owns the equipment for the depreciation resulting from its use in another county.

Recommendation

- 1. When a county maintenance district borrows a piece of equipment from another county for a significant portion of that piece of equipment's useful life (e.g., 25 percent), the borrowing county should reimburse the county that originally purchased the equipment for the deprecation incurred.**

FINDING A10

Many Maintenance District Facilities Need to Be Renovated or Replaced

***Summary:* Many PennDOT maintenance facilities are in need of major repairs and renovations. Renovations are probably not economically feasible or desirable at some facilities; these facilities should be consolidated or replaced. The Department has established a prioritized listing for renovations and improvements, and options to correct facility deficiencies are to be identified by June 1996.**

About 80 percent of PennDOT's 68 maintenance districts and 11 engineering district facilities were constructed prior to 1940 and are well over 50 years old. The last new facility was opened in 1970.

The older maintenance district facilities were not built to handle the current type of maintenance vehicles and can result in inefficiencies in shop repairs and potential safety hazards. For example, 11 facilities, such as the Chester County facility, have floors that cannot support the weight of heavier vehicles. Low ceilings in maintenance bays at several facilities, such as Carbon County, preclude certain types of maintenance activities. The lack of overhead cranes also limits operations at several facilities. Changes in PennDOT policies and standards have rendered other facilities unsuitable for storing materials, welding, and/or painting.

Moreover, the growth of the communities surrounding several maintenance district facilities affect PennDOT's ability to park equipment, conduct necessary equipment maintenance, and follow sound environmental practices. For example, the Pike County maintenance staff is forced to park most of its vehicles at off-site storage sheds. They also do not have adequate vehicle washing facilities. The growth of the surrounding community has also created a potential for environmental hazards from drainage sumps which were built to 1930s specifications.

Our 1984 PennDOT performance audit raised similar concerns about the condition of the Department's maintenance facilities. PennDOT, in response to the 1984 audit, stated that they would initiate a multi-year plan for building renovations and improvements. The Department, however, made it clear that only limited funds could be allocated to this effort and that their emphasis would be on "keeping existing buildings operational, rather than constructing replacements."

As part of this multi-year plan, the Department has evaluated its maintenance facilities and established a priority listing for renovations and improvements.

Evaluation criteria include the location of the facility, the size of the lot, the energy efficiency of the building, the structural integrity of the building, the plumbing, the electrical wiring, the roof, the HVAC system, the windows and doors, the telecommunications wiring and system, and the overall interior. The lower the score, the worse the facility. PennDOT's current priority listing for facility renovation or replacement is presented on Table 15. The table includes both engineering district and maintenance district headquarters facilities.

This prioritization of facilities was the first phase of PennDOT's multi-year plan. PennDOT anticipates completing the second phase--the selection of viable options to correct the deficiencies--by June 1996. One option being explored is the feasibility of "revenue-neutral" property exchanges to relocate and update certain facilities. Under this option, which was explored in some depth by the IMPACCT Commission, PennDOT would trade a maintenance facility located on desirable property (e.g., land near a population center suitable for commercial development) for a new facility located at a less desirable location.¹ Key issues that would need to be resolved under such an approach include (1) identifying facilities that have commercial development potential, (2) remediation of environmental issues at the existing facility prior to the exchange, and (3) the need for legislation authorizing PennDOT to contract for property exchanges without the need for legislative approval on an individual site-by-site basis. PennDOT is also considering the possibility of consolidating selected maintenance district facilities.

Recommendation

- 1. The Department should make its recommendations and cost estimates for correcting the most serious maintenance district facility deficiencies available to the House and Senate Transportation and Appropriations Committees.**

¹Although not included in the IMPACCT Commission's final report, *Making Government Make Sense*, this topic was addressed in a Commission issue paper.

Table 15

PennDOT Facility Improvement Prioritization Ranking

| <u>Priority</u> | <u>County</u> | <u>Score</u> | <u>Priority</u> | <u>County</u> | <u>Score</u> |
|-----------------|-------------------|--------------|-----------------|-----------------------|--------------|
| 1 | Washington | 185 | 41 | Delaware | 345 |
| 2 | Columbia | 185 | 42 | Berks | 345 |
| 3 | Bucks..... | 195 | 43 | Montgomery | 345 |
| 4 | Clinton..... | 205 | 44 | Clearfield (DO) | 350 |
| 5 | Forest | 210 | 45 | Centre | 350 |
| 6 | Luzerne | 215 | 46 | Franklin..... | 350 |
| 7 | Sullivan..... | 225 | 47 | Tioga | 355 |
| 8 | Tunnels Fac..... | 230 | 48 | Mercer | 355 |
| 9 | Elk..... | 230 | 49 | Wayne..... | 360 |
| 10 | Cumberland | 230 | 50 | Lancaster..... | 365 |
| 11 | York..... | 230 | 51 | Dauphin..... | 365 |
| 12 | Somerset | 235 | 52 | Huntingdon | 365 |
| 13 | Bradford | 245 | 53 | Juniata | 365 |
| 14 | Bedford..... | 255 | 54 | Beaver..... | 365 |
| 15 | Union..... | 255 | 55 | Lawrence | 370 |
| 16 | Pike | 260 | 56 | McKean..... | 375 |
| 17 | Chester | 265 | 57 | Monroe..... | 375 |
| 18 | Venango (DO)..... | 265 | 58 | Susquehanna..... | 375 |
| 19 | Lebanon..... | 270 | 59 | Delaware (DO) | 375 |
| 20 | Potter..... | 280 | 60 | Northumberland ... | 375 |
| 21 | Dauphin (DO) | 280 | 61 | Cambria..... | 380 |
| 22 | Cameron..... | 285 | 62 | Clarion..... | 380 |
| 23 | Philadelphia..... | 285 | 63 | Wyoming..... | 385 |
| 24 | Adams | 290 | 64 | Indiana | 385 |
| 25 | Allegheny | 290 | 65 | Westmoreland | 385 |
| 26 | Carbon..... | 290 | 66 | Greene | 395 |
| 27 | Snyder | 295 | 67 | Lackawanna (DO) . | 395 |
| 28 | Mifflin..... | 295 | 68 | Warren..... | 395 |
| 29 | Lehigh | 295 | 69 | Lycoming | 405 |
| 30 | Butler | 300 | 70 | Fayette (DO)..... | 405 |
| 31 | Lehigh (DO) | 305 | 71 | Fayette..... | 405 |
| 32 | Armstrong | 305 | 72 | Indiana (DO) | 410 |
| 33 | Perry..... | 310 | 73 | Blair (DO)..... | 415 |
| 34 | Jefferson..... | 315 | 74 | Fulton | 425 |
| 35 | Lackawanna..... | 320 | 75 | Blair..... | 435 |
| 36 | Crawford | 320 | 76 | Lycoming (DO) | 445 |
| 37 | Northampton..... | 330 | 77 | Erie | 450 |
| 38 | Venango..... | 330 | 78 | Allegheny (DO)..... | 455 |
| 39 | Clearfield..... | 335 | 79 | Montour (no bldg.) | |
| 40 | Schuylkill | 335 | | | |

Source: Compiled from data obtained from PennDOT's Bureau of Office Services.

FINDING A11

Efforts to Address Work Zone Safety and Motorist Inconvenience Could Be Improved, but Liability Concerns Limit the Steps That Can Be Taken

Summary: Between 1991 and 1995, accidents in work zones increased 82 percent. Largely as a result of the fatalities and injuries in highway construction zones in 1993, PennDOT has placed increased attention on work zone safety initiatives such as attempting to reduce lane closings and sign clutter. Due to liability concerns, however, speed reduction and construction warning signs sometimes remain in place even though construction is no longer in process. Such signs cause motorist inconvenience and can cause motorists to question the validity of other construction warning signs.

As Table 16 shows, work zone accidents have increased steadily since 1991. Work zone fatalities have remained stable except for a large jump in 1993. The Department attributes the increase in work zone accidents largely to increased speeding in work zone sites, tailgating, inattentiveness, and drivers not realizing that large trucks require long stopping distances. Increased construction and maintenance work are also contributing factors.

Table 16

Work Zone Accidents, Fatalities and Injuries* (CY 1991 Through CY 1995)

| | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>1995</u> | <u>Percent Change</u> |
|--|-------------|-------------|-------------|-------------|-------------|-----------------------|
| Total Accidents | 1,094 | 1,372 | 1,897 | 1,935 | 1,994 | 82% |
| Total Fatalities: | | | | | | |
| Drivers and Passengers | 19 | 19 | 37 | 19 | 18 | (5)% |
| Construction Workers | 4 | 1 | 0 | 0 | 2 | (50)% |
| Total Injuries: | | | | | | |
| Drivers and Passengers | 1,110 | 1,431 | 1,857 | 1,919 | 1,905 | 72% |
| Construction Workers | 28 | 35 | 26 | 34 | 24 | (14)% |
| Annual Vehicle Miles Traveled (Billions) | 90.75 | 92.34 | 94.09 | 95.80 | NA | 6% |

*Includes accidents, fatalities, and injuries reported on state and local roads and the Pennsylvania Turnpike.

Source: Developed from statistics reported in the Department's publication *Crash Facts and Statistics*.

Increased enforcement efforts by the Pennsylvania State Police and additional work zone mitigation efforts undertaken by the Department appear to have been successful in reducing fatalities after 1993, although the number of injuries and accidents continued their upward trend in 1995. PennDOT does not have specific written goals related to work zone accident reduction.

Traffic Control Plans and Work Zone Quality Assurance Reviews

Consultants or district personnel must develop a Traffic Control Plan (TCP) for every construction project. The degree of detail required for the plan depends on the complexity of the project and the volume of traffic affected. For example, a TCP we reviewed for a major interstate project specified when lanes could be closed, how long such closures could last, and that closed lanes were to be opened on completed sections unless it would affect on-going work. Engineering district office personnel review and approve the TCP before construction can start and must give approval to any changes made once construction begins. Contractors can be assessed penalties for noncompliance with the plan.

In addition, the Federal Highway Administration (FHWA) requires PennDOT to undertake quality assurance (QA) reviews of work zones to ensure that they conform to federal regulations and guidelines. Table 17 shows the number of work zone QA reviews undertaken for the last five fiscal years by central office staff and the number and percent of those work zones found to be unacceptable.¹ Quality assurance reviews of work zones are also undertaken by personnel in the district offices who work with contractors on a daily basis.²

The quality assurance checklist, which is used by inspectors to rate compliance with work zone regulations, has been rewritten and will be tested during the 1996 construction season. The former checklist, which had been followed for 10 years, addressed 60 different areas. These included recordkeeping, signs (visibility, placement, construction), whether traffic control devices (barrels, cones, vertical panels, concrete barriers) are properly maintained and erected, lighting in the work zone, whether pavement markings are confusing, and the placement of flaggers. The new checklist addresses these issues, as well as additional areas related to ensuring work zone safety.

¹Personnel from the central office conduct the audits. The Regulations and Traffic Control Section within the Traffic Engineering and Operations Division undertake QAs with representatives of the eleven District Traffic Units. Additional QAs are undertaken by personnel from the FHWA and PennDOT's Bureau's of Design, and Maintenance and Operations.

²In 1993, district personnel undertook 894 QA reviews, in 1994 there were 990 reviews and in 1995 there were 929. District personnel are on-site at construction or maintenance sites on a daily basis. They utilize the same QA checklist used by the Traffic Engineering and Operations Division. Information on the types of deficiencies found during their QA visits are reported to the Department's central office on an annual basis for inclusion in the annual report on Work Zone Traffic Control provided to the FHWA. Generally, they indicate the same type of deficiencies as found by the central office review teams. In 1994 these deficiencies included insufficient taper length, traffic queues beyond the area signs, and flaggers not being positioned properly.

Table 17

Number of Work Zone Traffic Control Quality Assurance Reviews Undertaken by PennDOT's Central Office

| <u>Fiscal Year</u> | <u>Number of Work Zone Reviews</u> | <u>Work Zones Found Unacceptable</u> | <u>Percent Unacceptable</u> |
|--------------------|------------------------------------|--------------------------------------|-----------------------------|
| 1990-91 | 108 | 18 | 16.7% |
| 1991-92 | 107 | 11 | 10.3 |
| 1992-93 | 89 | 10 | 11.2 |
| 1993-94 | 79 | 11 | 13.9 |
| 1994-95 | 98 | 22 | 22.4 |

Source: Developed from information contained in PennDOT's Highway Administration Program Measures.

However, even the new quality assurance review checklists do not address several key issues regarding motorist inconvenience, such as the appropriateness of lane closures within work zones, whether signs within the work zones are necessary and valid (e.g., construction is in progress when "Construction Ahead" signs are up and reductions in speed limits are appropriate), and whether lanes are reopened promptly once the work is finished. Department personnel noted that they hope to incorporate at least some motorist inconvenience factors as part of quality assurance reviews within the next few years.

PennDOT's Efforts to Improve Work Zone Safety and Motorist Convenience

The Department has undertaken several initiatives to improve work zone safety, including use of concrete barriers; brighter signs and channeling devices that are more visible and crash worthy; variable message signs; highway advisory radio; truck mounted attenuators (large crushable devices on the back of work vehicles to reduce the severity of accidents); improved communication with the trucking industry; distributing printed safety materials through Welcome Centers and driver licensing offices; rumble strips; better lighting; drone radar; increasing the presence of enforcement officers at work zone sites; and limiting lane closures in work zones.³

Because of the increase in accidents in 1993, a special work zone safety task force was formed consisting of PennDOT officials, the Pennsylvania State Police, and the construction industry. A major emphasis of this task force was to reduce

³Another recommendation by an internal Department review that Department central office work zone traffic control quality assurance staff be given the authority to shut down inadequate work zone set-ups was rejected because it was felt that the responsible district office should solely have the authority to shut down work zone sites.

the number of lane reductions on multi-lane highways by upgrading shoulders and using them for travel lanes. Lane closures and the resulting slow downs are contributing factors to work zone accidents and sources of motorist frustration and inconvenience.

A January 1995 private consultant report also noted that lane reductions should be eliminated whenever possible. According to the report, "if lane reductions must occur, institution of lane reduction enhancements is critical to alert motorists to the changing roadway environment On very long projects, workers may only be exposed to traffic within a relatively confined area. At any given time, a reduced regulatory speed may be appropriate for that small area and not the entire project." The report recommends specific actions the Department should take to ensure that lane closures are as limited as possible and, when needed, are restricted to that part of the work zone where work is actively in progress. The Department reviewed the recommendations and submitted those it felt were appropriate to the district offices for implementation on future construction projects. These recommendations included formally reviewing work zone set-ups midway through projects, inspecting signage on secondary roads at least once a week, and installing variable message signs on all major projects. District offices choose to accept these recommendations if they feel they are appropriate for work zones in their districts. PennDOT central office, however, does not maintain information on district office implementation. Officials in two districts we contacted noted that the recommendations, where applicable, had been implemented. Both also reported that they had already implemented some of the changes to try to improve work zone safety.

The Department has also been concerned that the warning and guide signs used in work zones are placed an adequate distance apart so drivers can read and respond to them. A February 1994 memo to all district engineers noted:

. . . the Department is requiring so many work zone signs, that some motorists are not paying sufficient attention to a majority of the signs some of which are very important. An example is at the beginning of a project where we sometimes use three signs, Road Construction 1500 Feet, then 1000 Feet, then 500 Feet, and the first construction activity is two miles downstream. The motorist is turned off by this irrelevant information.

The Deputy Secretary recommended that signs be scrutinized to eliminate redundant and irrelevant information so that motorists will be better able to comprehend the message on the more critical signs. Work zone regulations require that signs be installed prior to work but remain only as long as they are needed and they should be removed as soon as possible thereafter. In addition, when work is not in active progress and workers are not present, the regulations require that regulatory signs be covered or removed as long as there is no danger to the public.

The January 1995 consultant report found, however, that problems with signage continue. The report notes that to be effective signs must be in good condition, convey a clear and concise message, and be placed appropriately. Anything less causes motorists to question the validity of the sign message and, over time, results in the sign being ignored, thereby jeopardizing safety. They recommend that signage be reviewed daily and inappropriate signs removed or covered. The Department accepted these recommendations and district engineers were directed to instruct their staff to review signs for relevance and to remove those which are confusing to the motorist or no longer apply to current conditions. The district office's on site project engineers reportedly are to inspect traffic control a minimum of twice a day. They drive through the work zone to observe whether the site is within traffic plan compliance (e.g. to ensure that signs are visible and in place, or that cones and barriers are erected and placed correctly). They do not review specifically for motorist inconvenience factors.

As part of this audit, LB&FC staff drove through work zones in the local Harrisburg area to observe signage and lane closures. We found a large number of signs addressing reduced speed, and lane closure and merging. The signs were often spaced close together and sometimes appeared to have a "cluttered" appearance. From mid to late winter 1996, we noted reduced speed limits and associated construction zone signs at one major non-interstate construction site; yet, there was no indication of active construction, and motorists were traveling 60 to 65 mph in the 40 mph construction zone. A PennDOT official explained to us that the construction zone signs probably should have been removed from the area when construction was halted for the winter in December 1995. Additionally, on four separate occasions from late February through early April we observed numerous construction zone signs (including "Reduced Speed - 40 mph," "Be Prepared to Stop," "Roadwork [in] X Miles," "Roadwork Next X Miles") on one stretch of interstate that indicated that motorists should be aware of construction, but construction had not yet begun and no lane closures were in effect. Motorists in the area marked 40 mph were also traveling 60 to 65 mph, even in areas in which construction in subsequent weeks became active.

The Traffic Engineering and Operations Division informed us that contractors are reluctant to remove traffic and speed limit signs because they feel they will be sued if an accident occurs. While the engineering districts can require a contractor to remove a sign or return the speed limit to the regular speed, they report being reluctant to exercise this authority out of concern that the Department could become liable if the work zone signs are taken down prior to completion of the work. Although contracts impose liability on the contractor for accidents in work zones, the districts are concerned that it could be argued that the site was no longer a marked work zone and therefore the Department would be liable for any accidents. This issue has not been specifically forwarded to PennDOT's Office of Chief Counsel.

Recommendations

- 1. The Department should continue its efforts to include additional work zone safety and motorist inconvenience factors in its quality assurance reviews. As part of this effort, PennDOT should review the potential liability if it began enforcing the policy that inappropriate signs be removed or covered, as recommended by the Department's consultant in 1995.**
- 2. PennDOT should work with the State Police to ensure that valid work zone speed limit restrictions are enforced.**

FINDING A12

Truck Weight Waiver Fees Do Not Appear to Cover the Cost of the Damage Caused by Overweight Trucks

Summary: Truckers must apply for a permit to travel on Pennsylvania's highways if their trucks are in excess of the 80,000 pound weight limit. This is a component of the federal government's certification of Pennsylvania's truck weight enforcement program and is a condition of receipt of federal highway funds. Waiver permits cost \$15 plus 3¢ per ton mile traveled and are intended, in part, to defray the additional costs associated with road maintenance from overweight trucks. In FY 1994-95 the fees generated \$6 million from 290,000 permits, and an additional \$4 million in overweight ton-mile fees. PennDOT, however, does not maintain information on the damage to Pennsylvania's highways resulting from overweight trucks, and the 3¢ per ton-mile fee has remained the same since 1975. Additionally, only about 25 percent of the fines assessed against truckers for noncompliance with overweight requirements is actually collected.

The Vehicle Code, 75 Pa.C.S.A. §4941, sets limits on the gross vehicle weight (80,000 lbs.) that vehicles traveling on state highways must meet. To regulate vehicles exceeding these limits, PennDOT administers a special permit program whose purpose includes protecting the structural integrity of the highway and bridge system. The special hauling permit specifies approved routes and any special conditions that may be required, such as a pilot car or police escort, lighting, signing, flagging, inspection requirements, travel period restrictions, and inclement weather restrictions.

The general issuance fee for each permit is \$15 for a single trip permit (set by law in 1974) plus 3¢ per ton mile for the number of tons which exceed the vehicle's registered gross weight (set by law in 1975). Additionally, PennDOT collects separate fees for special purpose or oversize vehicles, vehicles which require an escort, and for special administrative requirements. PennDOT must certify to the Federal Highway Administration (FHWA) that all state laws and regulations governing size and weight limits are being enforced on highways for which federal funding was received and that state laws governing vehicle weight on the Interstate System are

consistent with federal rules. Without such certification, federal highway funds could be lost.¹

Permits Issued and Fees Collected

Between FFY 1991 and FFY 1995, overweight truck permits rose by 68 percent, from approximately 53,000 to 89,500 (see Table 18). Information on the number of oversize truck permits issued before FY 1994-95 is not available,² but in FY 1994-95, PennDOT issued 290,000 special hauling (overweight and oversize) permits.

Table 18

Overweight Truck Permits Issued by PennDOT

| <u>Federal Fiscal Year</u> | <u>Overweight Permits Issued</u> |
|--------------------------------|--------------------------------------|
| 1991 | 53,205 |
| 1992 | 64,877 |
| 1993 | 73,408 |
| 1994 | 79,514 |
| 1995 | 89,559 |

Source: Information obtained from PennDOT's Division of Motor Carrier Safety.

In FY 1994-95 PennDOT collected \$10 million in revenue from special hauling permits (\$6 million from permits and \$4 million in overweight ton-mile fees). As shown in Table 19, total revenue from the sale of special hauling permits in Pennsylvania increased by 36 percent from FY 1990-91 to FY 1994-95, and revenue from overweight truck fines decreased 11 percent. While revenue earned from special hauling permits rose 36 percent, the actual increase in total truck miles in Pennsylvania was 11 percent, suggesting that the number of overweight and oversize trucks traveling in Pennsylvania is growing faster than trucks carrying normal loads.

PennDOT has not done any studies to determine if the revenue generated from special permit fees is sufficient to cover the concomitant damage to roads. In March 1994, however, the FHWA reported that they were concerned that permit fees in existence as of 1992 were insufficient. The report notes that such fees may

¹As of 1994, Pennsylvania had the seventh largest public road network in the nation with 118,445 miles of public road and 23,101 bridges greater than or equal to 20 feet in the Commonwealth. Of this, 45,265 miles (38 percent) and 16,247 bridges (70 percent) are under state control. PennDOT is responsible for 40,486 of these miles (89 percent). Compared to the number of miles of highway controlled by other state DOTs, PennDOT ranks fifth in the nation behind North Carolina, South Carolina, Texas, and Virginia.

²Historical data was stored on one of the floors of the Transportation & Safety Building which was contaminated as a result of a fire in June 1994.

“not even cover administrative costs, much less damage to pavements and bridges.” It was FHWA’s position that permit fees should be sufficient to recover the proportional costs of damage caused by overweight trucks.

Table 19

Revenue Received From Overweight Trucks

| | <u>FY 1990-91</u> | <u>FY 1991-92</u> | <u>FY 1992-93</u> | <u>FY 1993-94</u> | <u>FY 1994-95</u> |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sale of Special Hauling Permits. | \$7,755,428 | \$7,756,215 | \$7,356,912 | \$7,843,767 | \$10,508,800 |
| Overweight Truck Fines | 1,559,436 | 1,254,709 | 1,218,687 | 1,229,453 | 1,394,775 |
| Reimbursement for Bonded Roads | <u>443,995</u> | <u>489,385</u> | <u>416,789</u> | <u>431,312</u> | <u>428,716</u> |
| Total..... | \$9,758,859 | \$9,500,309 | \$8,992,388 | \$9,504,532 | \$12,332,291 |

Source: Information obtained from Department of Revenue *Reports of Revenue and Receipts*, FY 1990-91 through FY 1994-95.

Truck Weight Enforcement

PennDOT and the Pennsylvania State Police undertake activities to ensure that trucks are not overweight or, if they are overweight, that they have been properly permitted. Motor Carrier Enforcement Officers (MCEO) have authority to conduct weight checks and safety inspections. They also inspect drivers’ records and can issue citations for size, weight, and safety violations, but they do not have arrest authority. They may also place vehicles out-of-service for being overweight. State Troopers have all the above authorities and can arrest violators and transport them to magistrates for arraignment.

PennDOT’s MCEO staff is divided into 26 county mobile teams and one mobile interstate team assigned to the eastern portion of the state.³ Teams are comprised of two MCEOs and one State Trooper. Twenty-five of the county mobile teams patrol non-interstate highways; the other is located on Interstate 80 at Pennsylvania’s only permanent weigh station at Clarion and is open five out of seven days on an irregular basis.

Table 20 shows that between FY 1990-91 and FY 1994-95 the number of trucks weighed increased 30 percent, but the number of truck weight violations

³PennDOT, until recently, had two interstate teams. The western team was disbanded indefinitely in 1993, however, so that the Department could fill inspection staff shortages on the county mobile inspection teams.

actually declined 12 percent. The increase in the number of trucks weighed is due to the increased use of Weigh in Motion (WIM) technology.⁴

Table 20

| | FY <u>1990-91</u> | FY <u>1991-92</u> | FY <u>1992-93</u> | FY <u>1993-94</u> | FY <u>1994-95</u> |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Trucks Weighed..... | 379,647 | 395,799 | 467,490 | 482,764 | 494,985 |
| Violations..... | 5,829 | 5,208 | 5,138 | 4,832 | 5,118 |
| Trucks Overweight (%) . | 1.5% | 1.3% | 1.1% | 1.0% | 1.0% |
| Face Value of Fines (Millions) ^a | \$4.9 | \$4.3 | \$4.7 | \$5.1 | \$5.8 |
| Average Fine | \$849 | \$831 | \$915 | \$1,064 | \$1,127 |
| Fines Collected (Millions) ^b | \$1.6 | \$1.3 | \$1.2 | \$1.2 | \$1.4 |
| % of Fines Collected | 33% | 30% | 26% | 24% | 24% |

^aThe fine amounts listed represent the total dollar amount of fines given out by truck weight enforcement officers. The Department does not have information on the actual dollar amount of fines imposed solely as a result of truck weight violations.

^bFines issued in one fiscal year may have been paid and reported to the Department of Revenue in the following fiscal year.

Source: Information obtained from PennDOT's Annual Reports.

Exceeding the applicable weight limit is a summary offense punishable by a fine of \$75 plus \$75 for each 500 lbs. (or part thereof) in excess of the applicable weight limit. Fines can be doubled in some circumstances.

Table 20 also shows that only about 25 percent of the fines imposed are actually collected. According to PennDOT officials, district justices often seek to lower the amount of a fine assessed. They may also allow the vehicle owner to pay the fine over a period of time. A spokesperson for Pennsylvania's district justices told us that in many cases fines are adjusted, but that this must be done with the agreement of all parties. For example, the district justice may determine that a trucker is unable to pay the fine, but the weight detail official must agree to change the weight of the vehicle to reflect the amount the district justice believes the trucker can pay. He said that the collection rate for the fines actually imposed by district justices is good.

In 1985, the FHWA examined the process by which truck weight violations are adjudicated by the states. They identified five shortcomings:

⁴Trucks are directed to slowly roll over pads, generally implanted under the pavement. As they roll over the weight pad, a computer notes their weight and informs inspection staff which trucks are potentially overweight. Those trucks can then be flagged and stopped for a more thorough weight inspection.

- Judges who view overweight violations as insignificant and suspend all or most of the fine.
- Prosecutors who fail to effectively prosecute overweight cases because other cases take precedence.
- Defendants are generally drivers, rather than the owner or shipper who made the decision to overload the truck.
- Penalties that are imposed are too small to be an effective deterrent.
- States define overweight truck operation as a crime and therefore adjudicate the case in criminal court where it receives low priority.

PennDOT has not taken action on these findings, nor has it studied whether Pennsylvania's program might have the same type of shortcomings.

Roadway Damage Caused by Overweight Trucks

The Department has cited freeze/thaw cycles and heavy trucks as the two primary causes of roadway damage in Pennsylvania. Data to show the specific damage that trucks cause is not available in part because it is impossible to know how many trucks pass over a stretch of roadway. A report released in 1990 by the National Transportation Research Board noted, however, increases in truck weights can be expected to affect pavement rehabilitation costs in two ways. First, an increase in the number of trucks carrying heavier loads would shorten the time interval to the next resurfacing. Second, at the time resurfacing is required, the damage done by higher truck weights requires a thicker pavement overlay or more frequent resurfacing in the future. The National Transportation Research Board found that a truck that is 20 percent over the weight limit will cause about 75 percent more pavement wear than the same truck operating within the weight limit.

Other States

Two states, Texas and Washington, have undertaken studies that appear to be pertinent to Pennsylvania and might be models for PennDOT to follow in undertaking their own study of the effect of overweight vehicles on roads and bridges.

Texas

In November 1993 the Texas Transportation Institute released a report on weight tolerance permits. The report notes that very few states have a damage assessment program.⁵ However, it also found that it is difficult to prove that a given truck caused damage to a road because the damage generally accumulates over an

⁵Pennsylvania, along with four of the peer states, was found not to have a damage assessment program. The remaining three states undertook visual inspection of roadway damage caused by overweight trucks.

extended period of time. The study concluded that the existing permit fee, which covers a full year, should be increased from \$75 to a maximum of \$2,217.⁶

Washington

In 1994 the Washington State Transportation Commission released two reports addressing the effects of heavy trucks on pavement. The Commission concluded that overweight permit fees did not compensate for the additional damage and estimated that only up to 20 percent of overweight trucks were apprehended. It identified a number of strategies, including periodically adjusting fees and fines so that they adequately capture the cost to repair damage caused by overweight trucks. Another recommendation was that the companies that load the trucks or trailers, not the drivers, be responsible for fines.⁷

Other State Permit Fees

Exhibit 15 presents information on Pennsylvania's overweight and oversize permit fee as compared with eight peer states. Each state has its own unique special hauling permit process, making direct comparisons difficult. PennDOT also surveyed the six contiguous states and found that all but two had higher overweight permit fees than Pennsylvania.

While there is no national standard, in 1994 the FHWA reported that only about half the states had graduated fee schedules for overweight permits. In Washington, for example, if a truck's extra weight is between 1 to 5,999 pounds over its registered weight, the per mile fee is 7¢. If it is 30,000 to 35,999 pounds over registered weight, the per mile fee is 63¢, and over 80,000 pounds or more, the permit fee is \$2.80 per mile. In Pennsylvania, the overweight fee is not graduated; it is a flat 3¢ per ton mile for each ton in excess of the vehicle's registered gross weight.

⁶The authors of the report used a formula developed by the American Association of State Highway and Transportation Officials (AASHTO) to estimate damage impacts.

⁷Independent truckers are often contracted to pick up trailers that have already been loaded.

Exhibit 15

Single Trip Fees for Nondivisible Overweight Loads*

| State | |
|----------------------|---|
| Illinois | Fees range from \$10 to \$280 for nondivisible overweight loads depending on weight and distance traveled |
| Michigan | \$5 fee for nondivisible overweight loads \$20 for a 10-day permit, issued only to vehicles not apportioned with Michigan |
| Minnesota | \$15 + 4¢ to 20¢ per mile, plus damage assessment costs based on the total axle weight and the distance between axles |
| Missouri | \$12 for up to 120,000 lbs. \$12 + \$15 for each 10,000 above 120,000 lbs. |
| New York | \$40 New York Thruway - \$20 + 3¢, 5¢, or 8¢ per ton mile depending on the weight of the vehicle, plus \$2 per trip thru fixed toll barriers |
| North Carolina | \$5 |
| Ohio | \$10 + \$5 surcharge |
| Pennsylvania | \$1 per mile for turnpike \$15 + 3¢ per ton mile for all weight in excess of vehicle's registered gross weight |
| Virginia | \$10 \$10 + 10¢ per mile for vehicles which exceed statutory weight limits and for vehicles which cannot be legally licensed |

*States also set separate fees for overdimensional loads and vehicles.

Source: Developed from information obtained from *Overweight Vehicles - Penalties & Permits, An Inventory of State Practices for Fiscal Year 1992*, Report to Congress from the Secretary of Transportation.

Recommendations

1. **PennDOT should develop and provide to the House and Senate Transportation Committees an estimate of the permit fee that would be required to cover the additional damage caused to roadways by overweight trucks.**
2. **The General Assembly should consider increasing the truck weight waiver fee to cover all or at least a significant portion of the damage caused by overweight trucks. The General Assembly should also consider authorizing PennDOT to adjust such fees in regulation, based on cost factors and criteria designated in statute.**
3. **PennDOT should convene a working group comprised of representatives of the Administrative Office of PA Courts, the PA Attorney**

General's Office, and the Special Court Judges Association to address what appears to be a routine practice of reducing the fines imposed on truckers. As part of this effort, this group should explore the feasibility of imposing the fines on the companies that load the overweight trucks and trailers rather than on the truckers who haul these loads.

FINDING A13

PennDOT Will Spend About \$16 Million to Comply With Federal Metric System Conversion Requirements

Summary: PennDOT anticipates that it will expend \$16 million by 1999 to comply with federally mandated metric conversion requirements. The Department expects to begin using metric measurements throughout its operations by July 1997. The federal requirement that states convert road signs to metric units, however, has been dropped.

The 1988 Omnibus Trade and Competitiveness Act amended the 1975 Metric Conversion Act and declared the metric system as the preferred system of weights and measures in the United States. Executive Order 12770 of July 1991 required federal government programs to convert to metric units within a fixed time frame. Order 1020.1c of the United States Department of Transportation established policy and administrative procedures for this transition. The Federal Highway Administration (FHWA) metric conversion plan, with specific implementation dates, was approved in October 1991. The plan requires that all direct federal and federal-aid construction contracts awarded after September 30, 1996, must be expressed in metric units.

PennDOT initiated metric conversion in April 1993 with the formation of an advisory committee, a work group, and various task groups. This involved a comprehensive effort to update all publications, computer programs, and traffic signs to include "enhanced national specifications and standards for economical design and safety improvements." Nearly \$8 million in expenditures had been incurred through FY 1993-94. The Department anticipates incurring an additional \$8 million in costs through 1997.

Six contract consultants support PennDOT's conversion to the metric system. Modjeski and Masters is working on the load and resistance factor design and the conversion of PennDOT's policy manuals. Gannett Fleming is converting all highway related publications. HDR is working on project schedules. Edwards and Kelcey is working on maintenance issues and traffic protection signing. Michael R. Baker, Inc. and Imbsen are working on various management information systems and related analysis programs.

As of early March 1996, the construction and design manuals were in final draft form. The Metric Survey Manual was ready for publication and a general metric training course had been developed. Impact studies on current regulations

have also been completed. Other tasks are in progress. Changes to testing equipment are approximately 70 percent complete and training courses are being prepared for the new equipment. Conversion of the design and construction analysis programs is about 75 percent complete. Conversion of management information systems is also about approximately 75 percent complete.

A June 27, 1994, FHWA Federal Register notice announced the postponement of the September 30, 1996, deadline for converting highway signs to metric units but gave no new deadline. The postponement was in response to new congressional requirements that prohibited the use of federal-aid highway funds for this activity and to negative comments on sign conversion received in response to FHWA's August 31, 1993, Federal Register notice.

Designs for new traffic signs are completed, but production of the new signs was deferred by PennDOT as it appeared that the federal requirements would be relaxed. PennDOT had estimated that it would cost an additional \$15 million to replace all the highway traffic signs should this requirement be enforced. The National Highway Systems Act of 1995 then withdrew this requirement. States must fully implement the remaining components of federal metric conversion by the year 2000. PennDOT officials expect to begin using metric system measurements throughout PennDOT operations by July 1997. Signage will not change.

A PennDOT cost-benefit analysis concluded that their \$16 million metric conversion expenditure will be partially offset by approximately \$5 million per year in future project cost savings. These savings are anticipated from a decrease in work-hours through the elimination of conversion calculations, an increase in the accuracy and efficiency of design programs, and contract processing time savings which will be achieved interfacing with the private contracting community which already works in metric.

PennDOT officials expect that the metric conversion requirements will have little impact on local governments. The Department will supply all local governments with a free copy of the new metric manuals and software. Most modern surveying instruments are already in metric, so surveying may be simplified because the measurements will not need to be converted into English standards. The Department anticipates the FHWA will grant waivers for design work that was begun prior to the September 1996 implementation date so that current projects will not need to be redesigned under metric standards.

FINDING B1

Although Traffic Fatality Rates Have Been Decreasing, Accident Rates Among Young Drivers Remain High

Summary: Paralleling a national trend, traffic fatality rates in Pennsylvania have been decreasing in recent years. Pennsylvania has ranked at or near the middle among the states over the last five years in fatality rates. Safer cars and initiatives taken by PennDOT and others, such as the National Highway Traffic Safety Administration and the State Police, have contributed to the reductions. However, accident rates for teenage drivers remain high, more than four times the rate for middle-aged drivers. National data and early evidence in Pennsylvania is inconclusive as to whether the higher speeds now allowed on limited access rural highways will result in higher fatality rates.

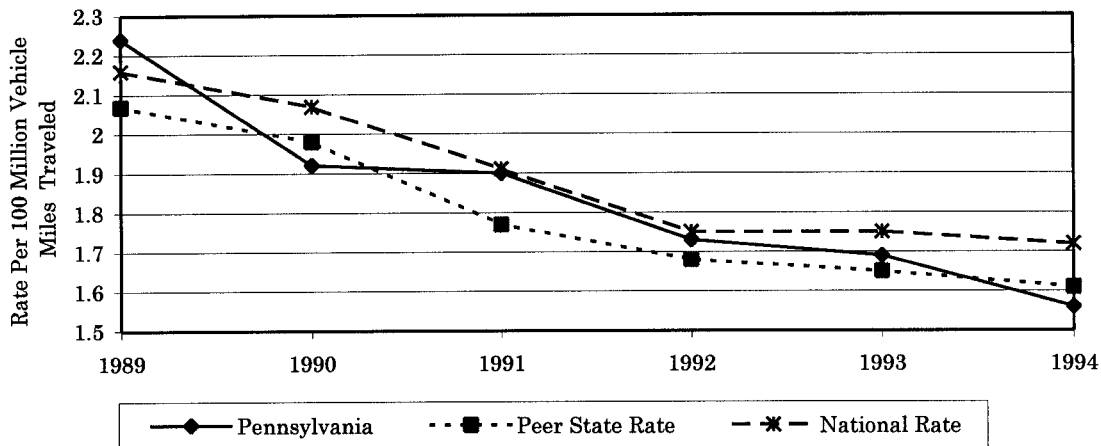
In 1995 there were 1,480 deaths on Pennsylvania highways, a 2.8 percent increase over 1994. Despite this increase, 1995 had the third lowest death toll since 1945. While the final fatality rate (i.e., fatalities per 100 million vehicle miles traveled) for 1995 is not yet available, the fatality rate in 1994 was 1.6 persons per 100 million miles traveled, the lowest rate since PennDOT began keeping statistics. (See Exhibit 16.)

According to highway safety experts, the decreasing fatality rate is attributable to several factors, including safer vehicles, improved highway design, mandatory driver education for certain drivers, enhanced enforcement, increased seat belt use, and less drunk driving. Analysts also credit a certain percent of the reduction in highway fatalities to the national 55 mph speed limit which began in 1974. In 1987, the U.S. Congress eased this restriction, allowing states to raise limits to 65 mph on rural highways where access was limited, and in 1995 Congress abolished the national speed limit altogether.¹ Pennsylvania raised its speed limit to 65 mph effective July 13, 1995, affecting about 1,400 miles of highway. While it is too early to say with certainty whether higher speed limits will result in higher fatality rates in PA (the increase was only in effect for six months in 1995), 34 persons were killed in 1995 on the interstate system in what are now 65 mph zones compared with 20 in 1994. The Pennsylvania Turnpike had 12 deaths in 1995 during the six months in which the higher limit was in effect compared to 10 deaths during the same period in 1994.

¹According to the Insurance Institute for Highway Safety, those states which raised their speed limits to 65 mph in 1987 experienced between 15 and 20 percent more highway deaths each year.

Exhibit 16

Motor Vehicle Fatalities Per 100 Million Vehicle Miles Traveled



Source: Developed from Federal Highway Administration, Office of Highway Information Management data.

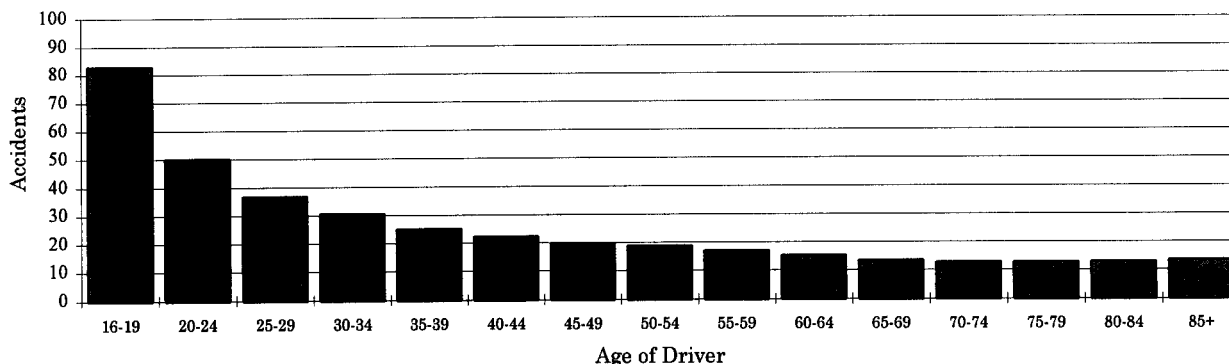
To improve highway safety, the Department has developed a Safety Management System (SMS) with 16 strategy areas. The SMS was developed by PennDOT's Bureau of Highway Safety and Traffic Engineering and adopted by the Governor's Traffic Safety Council, initially in response to a federal statutory (ISTEA) mandate which was removed in 1995. The Department anticipates proceeding on a discretionary basis with most of the SMS plan's strategies.

Accident Rates of Young Drivers

Police and traffic experts note that while "speed kills," of more concern are the higher speed limits combined with an increase in aggressive and reckless driving. This is a particular concern for younger drivers who are two to three times more likely to be involved in a crash than middle-aged drivers (see Exhibit 17). Young drivers often feel invincible and, desiring to impress peers, engage in risky driving behavior, including excessive speed for conditions and taking chances when passing other vehicles. Inexperience and alcohol are also important factors.

Exhibit 17

Driver Crash Involvement by Age (Accidents per 1,000 Drivers Within Age Group)



Source: Developed from information provided by PennDOT's Bureau of Highway Safety and Traffic Engineering.

Pennsylvania has taken various steps to help decrease the accident rate among young drivers, including limiting nighttime driving privileges (the Cinderella license) and suspending until age 18 the operating privileges of a "Cinderella license" holder convicted of driving under the influence. Two other strategies, lowering the legal limit for blood alcohol to .02 percent for drivers under age 21 and graduated licenses, are discussed below. Exhibit 18 shows additional traffic safety initiatives PennDOT is taking or planning for young drivers.

Lower Blood Alcohol Level Thresholds

To qualify for federal grant monies to finance sobriety checkpoints (23 U.S.C.A. §410), states must meet five of seven criteria.² Pennsylvania has met three of the five required criteria. A fourth is currently under review by the National Highway Traffic Safety Administration (NHTSA) for compliance with the federal requirement. One of the criteria that has not been met is to lower the legal limit for Blood Alcohol Concentration (BAC) to .02 percent for persons under age 21.³ Unless Pennsylvania meets five of the seven criteria by June 30, 1996, the Department reports it could forfeit \$3.4 million in federal grants over the next two years. If the state fails to pass such legislation within the next several years,

²These are: using an administrative license suspension for driving under the influence; establishing a .08 percent blood alcohol concentration for driving while intoxicated; having a statewide sobriety checkpoint program; having a self-sustaining DUI prevention program; having an underage drinking, driving prevention program; having mandatory sentencing for DUI; and establishing the blood alcohol concentration at .02 percent for drivers under age 21.

³The other two criteria Pennsylvania has not implemented are the .08 percent BAC for persons 21 and older and an administrative license suspension system.

federal highway funding will also be lost beginning in FFY 1998 (\$12 million). In FFY 2000, \$25 million would be jeopardized annually.⁴

Exhibit 18

Safety Management Strategies for Young Drivers

- Continue to expand and evaluate the enhanced driver education program. Once the initial evaluation is complete, if results are positive, create a significant expansion of the program for the 95/96 fiscal year. If the final evaluation provides positive results, pursue legislation to make the enhanced program mandatory.
- Critically evaluate and improve the refresher course provided in the senior year of high school.
- Pursue legislation which lowers BAC to .02 percent for under age 21 and .08 percent for age 21 and over.
- Pursue legislation making it at least a primary offense if safety belts are not worn by all occupants in a vehicle driven by a "Cinderella" license driver. Include a provision that all occupants of the vehicle would also be cited.
- Upgrade the graduated license system to require 90 days permit issuance prior to license testing, graduated license to age 18 for any citation or crash, and to age 21 for alcohol-related offense.
- Develop and implement targeted intervention for youth for first citations and all crashes where they have responsibility.
- Encourage insurance companies to publicly advertise citation/crash free discounts for long-term safe driving.
- Try to reach a partnership with insurance companies that allows easier, cheaper, and more frequent access to our data systems in exchange for safe driver discount rates.
- Develop a curriculum that can be used in the 6th through 8th grade which has the potential to set good driving values in the students.
- Develop another PI&E campaign targeted to the youth but include information that parents, educators, and police can use (similar to Truck Smart). Utilize the LCB/Youth Project to incorporate these issues.
- Perform an assessment of how magistrates adjudicate citations and target an education program oriented towards those that will promote safer youth driving.

Source: Developed from the Department's Safety Management System plan.

Graduated Licenses

Another strategy for reducing accidents involving young drivers is a graduated licensing system. Under such systems, teens are granted driving privileges gradually as their skills and experience increase. Two national highway safety groups, the NHTSA and AAMVA, have developed a model graduated licensing system consisting of three stages: learner's permit, intermediate (provisional) license, and full license. Young drivers are required to demonstrate responsible driving behavior in each stage prior to progressing to the next. Exhibit 19 shows the major features of this system.

⁴Several bills before the General Assembly as of May 1996 include the 0.2 percent BAC provision, including HB 790, HB 1891, HB 2269, and SB 1534. HB 1014 provides that a person under 21 years of age is guilty of driving under the influence if the BAC is greater than 0.00 percent.

While no state has enacted all of these provisions, 16 states, including Pennsylvania, restrict young drivers in one or more ways (see Appendix D). In Pennsylvania, for example, the “Cinderella license” does not permit a driver under 18 years of age (17 with driver’s education) to drive after midnight without certain specified adults. Evaluations in California, Maryland, Oregon, and Pennsylvania have all shown reductions in crashes for their young drivers after implementing various components of the graduated system.

Exhibit 19

Graduated Driver Licensing System

| <u>Type of License</u> | <u>Rules</u> | <u>Conditions for Advancement</u> |
|---|---|--|
| Stage 1 Learner’s Permit Minimum Age, 15 1/2 | Pass vision and knowledge tests. Licensed adult always in vehicle. All occupants must wear seat belts. Zero alcohol while driving. Permit distinctive from other licenses. | Crash and conviction-free for at least 6 months. |
| Stage 2 Intermediate (Provisional) Minimum Age, 16 | Pass behind-the-wheel on-road test. All occupants must wear seatbelts. Zero alcohol while driving. Licensed adult in vehicle at night. Driver improvement actions initiated at lower point. Distinctive provisional license. | Crash and conviction-free for 12 months. |
| Stage 3 Full License Minimum Age, 18 | | |

Source: U.S. DOT, National Highway Traffic Safety Administration, September 1994.

Drunk Drivers

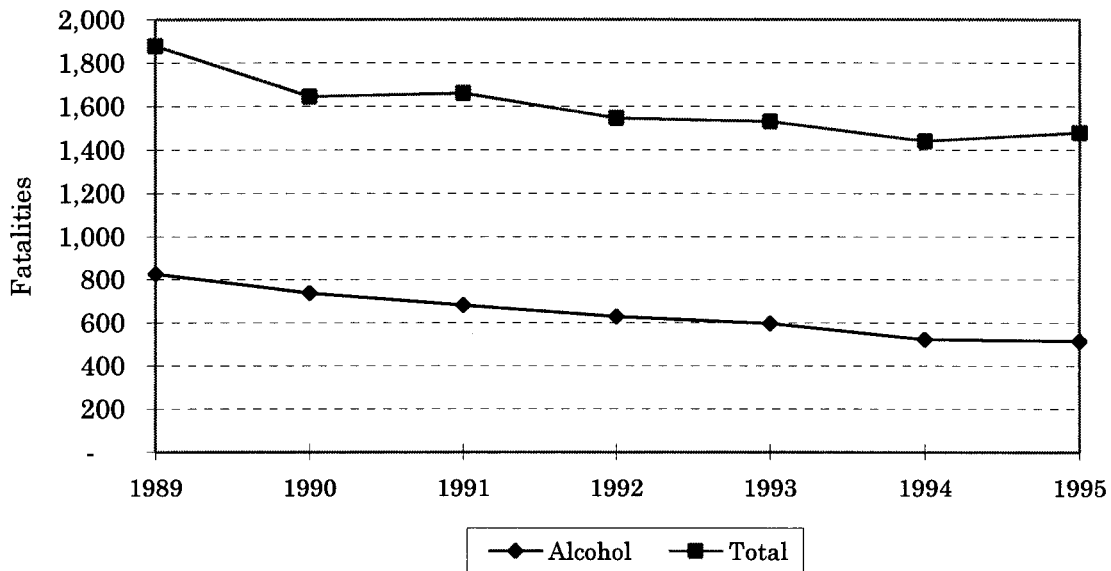
During 1995 there were 13,440 alcohol-related crashes in Pennsylvania, about a 4 percent increase from 1994. Alcohol-related fatalities declined between 1994 and 1995, continuing the decrease since 1988. Exhibit 20 shows that more than one-third of all fatalities are alcohol-related. According to PennDOT, drivers in alcohol-related crashes are 84 percent male with most crashes occurring after dark and between Friday night and early Sunday morning. Alcohol-related crashes are highest during the months of October through December, with the highest incidence occurring during the week preceding Christmas.

PennDOT has initiated and expanded the sobriety checkpoint program (SCP) in an effort to reduce the number of alcohol-related accidents. In 1991, police stopped

18,344 vehicles and made 112 DUI arrests at SCPs. In 1994, police stopped 120,382 vehicles and made 803 DUI arrests. PennDOT has also initiated several public information and education campaigns regarding DUI.

Exhibit 20

Total Fatalities vs. Alcohol-Related Fatalities
(1990 Through 1995)



Source: Developed from information provided by the Bureau of Highway Safety and Traffic Engineering.

PennDOT is considering proposing legislation to give it authority for administrative license suspension (ALS).⁵ ALS, as defined by federal law, requires a 90 day suspension within 30 days of a DUI arrest for a first time offender. Repeat offenders within a five year period are subject to a one-year suspension. The adoption of an ALS program is another of the criteria for federal sobriety checkpoint incentive money.

Department officials note that an ALS program is expensive and difficult to implement and will require (1) lead time for implementation, (2) financial resources, (3) the ability to privatize some of the functions, and (4) legislative authority. Where ALS has been put into effect in other states, PennDOT reports there has been a 10 percent reduction in alcohol-related fatalities. The Department is also considering a fee, perhaps of as much as \$150, for the return of a revoked license.

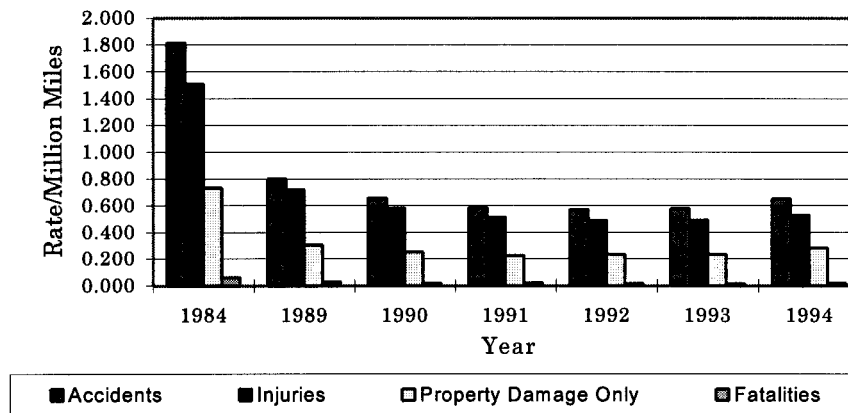
⁵HB 1263, introduced in 1995, would establish an administrative suspension and hearing process for driving under the influence suspensions. Under that proposal, the license would be suspended within 30 days of the arrest. A first offense would result in a 90-day suspension. If the person has one or more alcohol-related or drug-related driving offenses during the immediately preceding seven years, the suspension is for one year. An administrative review and hearing process is provided.

Truck Safety

Truck traffic through Pennsylvania has been increasing at an average annual rate of over 12 percent since 1984. During this period, truck accidents and truck fatalities per million miles have declined. (See Exhibit 21.) However, Pennsylvania experienced 145 truck-related fatalities in 1994, significantly more than the 123 that occurred in 1993.

Exhibit 21

Accidents/Injuries/PDO/Fatalities Per Million Miles (FFY 1984 Through FFY 1994)



Source: Developed from information provided by the Bureau of Highway Safety and Traffic Engineering.

When the trucker is at fault, speeding, following too closely, and insufficient pull-off space are often the cause of the accident. To address these problems, PennDOT is in the process of identifying sections of highway with high incidents of truck accidents related to these factors and emphasizing enforcement of traffic safety regulations on these sections. PennDOT is sharing a map with the locations identified with the State Police for stricter truck enforcement. The Department has also developed several strategies to assist Pennsylvania drivers in avoiding truck accidents (see Exhibit 22).

Recommendations

1. To avoid losing federal grants for sobriety checkpoints and future federal highway funding, the General Assembly should consider legislation to establish a .02 percent BAC limit for drivers under 21 years of age.
2. PennDOT should prioritize the various strategies for reducing accidents among younger drivers and truckers and report to the General Assembly on those requiring statutory change. It should develop additional public information and events accordingly.

PennDOT's Safety Management System Plan Strategies for Motor Carriers

Speed: Identify those ramps and mainline sections where speed is a major problem. Implement the following:

- Targeted enforcement blitzes by State Police that are well publicized.
- Brochure or other material to the trucking industry, and drivers, similar to the work zone map indicating where speed is a major problem.
- Automated variable speed message sign at select sites coupled with random enforcement.
- Dynamic signing on select ramps advising speeding trucks to slow down.

Tailgating: Assess effect of special order to State Police field (July 8, 1994) to give enforcement emphasis to truck tailgating problem.

Driving During Very Poor Weather

- Seek increased legislated fines or penalties for major incidents which occur during poor road conditions.
- Improve weather advisory information for trucking industry through dispersion of Bureau of Maintenance & Operations weather monitoring program.
- Update and re-issue the "Truck Smart" PI&E campaign sometime in 1995.
- Promote a pilot program with a motor carrier to encourage use of daytime running lights and lower speeds on arterials with at-grade intersections.
- Outside of the hours of service issue, assemble those additional factors which can more rapidly cause fatigue - develop and issue a mini PI&E campaign.
- Continue aggressive pursuit of drivers who violate hours of service limits through MCSAP and by State Police officers enforcing speed limits. (MCSAP hours of service training required of "S" Troop officers.)
- Disburse preliminary breath testors on pilot basis to select MCSAP program personnel.
- Selective emphasis on safety belt usage in MCSAP. If officer notices no safety belts at screening, e.g., pull in for check. Ensure safety belt citation is given if anything is cited.

Motor Carrier

- Transmit a copy of suspension of driver to motor carrier at time of suspension.
- In conjunction with carriers being notified of suspensions, perform after-the-fact carrier review to determine if driver stopped driving.
- Encourage motor carriers to set safety policies for safe driving performance and driving during adverse weather. (Probably need to work with PMTA, need good examples.)
- Encourage selected major carriers to add reflective tape on trucks.
- Encourage motor carriers to drop height of stub bumpers.
- Continue performing selected carrier reviews.

Highways

- Identify long steep grades that continue to be a problem (crashes) and upgrade signs and add pull-off areas and arrestor beds, as appropriate.
- Identify ramps and mainline curves where trucks overturn frequently (five or more in past five years). Develop countermeasures.

Vehicles

- Petition NHTSA to establish standards for truck tire re-caps.
- Continue expanding local police training for vehicle inspections.
- Continue emphasizing MCSAP safety inspections.
- Continue to explore the tire falling off vehicle issue and determine if petitions for rulemaking should be pursued.

FINDING B2

Decentralization and Privatization of Licensing, Registration, and Driver Exam Services Has Improved Customer Convenience, but Some Issues Remain

Summary: As required by Act 1992-166, PennDOT has been in the process of decentralizing and privatizing many of its driver licensing, registration, titling, and driver examination services. Initiatives implemented or being examined include “one-stop shopping” for driver licensing services, a PennMobile to provide services in rural areas, expanded messenger/legislative inquiry services, end-of-course skills testing at driver education programs, and the ability to renew drivers’ licenses and vehicle registrations over the telephone.

As part of its decentralization effort, PennDOT realigned several of its photo license and driver examination centers, causing temporary disruptions. We also found that driver exam wait times may exceed PennDOT’s two-week goal during the summer months and that travel times to driver licensing centers can be 45 minutes or more in some rural areas.

Section 8 of Act 1992-166 requires PennDOT to privatize and decentralize its driver licensing and motor vehicle transactions by using vehicle dealerships, private businesses, decentralized agents, self-service terminals, direct or indirect telephone linkage to departmental computers, or similar systems.¹ As described below, PennDOT has undertaken several initiatives to decentralize and privatize these functions.

PennDOT’s Decentralization Initiatives

PennDOT began decentralizing its driver licensing services in 1993 to make such services more accessible and convenient to customers. Exhibit 23 summarizes PennDOT’s various initiatives to decentralize driver licensing services, which are described in more detail below. Estimated decentralization costs to date have been \$20 million.

¹See Appendix E for operator license and vehicle registration processing information.

PennDOT Decentralization Initiatives

| <u>Type of Service</u> | <u>Type of Work</u> | <u>Status</u> | <u>Issues/Limitations</u> | <u>Cost</u> |
|--|---|--|--|--|
| Community Driver Licensing Offices (CDLOs) | Provides "one stop shopping" for obtaining driver's license. Driver testing, photo licensing, and on-line renewal services are all offered at the facility allowing both current and new residents to transact their driver licensing business and secure a license over the counter. | Started in 1994, there are five in Pennsylvania: New Kensington, Erie, Rockview, York, and Philadelphia. No others planned. | Performs all driver's license transactions except restorations and vehicle registrations. Issues temporary learner's permits to new drivers to encourage new drivers to practice until system issued permit arrives in mail. | Cost per CDLO averages \$350,000 for salary/benefits, supplies, equipment, maintenance, vehicle, and rental. |
| Automated Driver License Center | These centers provide over-the-counter camera card correction, learner's permit extensions, processing of exam results, and issuance of new resident photo licenses. | Started in 1994, all 67 consolidated driver licensing and photo centers (including CDLOs) will be on-line by December 1996. No plans for others. | Also, issues temporary learners' permits to new drivers. Does not provide renewal services. | Cost per center ranges from \$30,000 to \$500,000. |
| Stand Alone Photo Center | These locations provide voter registration and camera card processing for drivers' licenses. They also provide driver licensing forms and manuals. | Started in 1980, there are 27 up and running. Investigating cost and feasibility of two additional sites (Cumberland County and southern York County). | None | Cost per center averages \$70,000. |
| Stand Alone Exam Center | These centers do not have a photo center located with them. They perform driver exam services only and are not automated. | All centers transferred from PSP; there are five remaining. | Lack automation. Consequently, new residents receive a carbon copy of application as a temporary license, wait for camera card in mail, and then go to a photo center. Also, driver who passes test waits for camera card in mail and then goes to photo center. Lack of automation leads to customer inconvenience. | Cost per center ranges from \$7,000 to \$400,000 for salary/benefits, supply costs, rental, and maintenance costs. |

Exhibit 23 (Continued)

| <u>Type of Service</u> | <u>Type of Work</u> | <u>Status</u> | <u>Issues/Limitations</u> | <u>Cost</u> |
|---|---|--|---|--|
| New Resident Service Centers | New Pennsylvania residents will be able to change their license and registration at four driver license centers to provide one-stop convenience. | Four driver license centers will be expanded to provide the additional service. (Erie, Huntingdon Valley, Greensburg, and York). Huntingdon Valley location will begin operations in summer of 1996 and others by the end of 1996. | On-line messenger service centers and authorized messenger services may be concerned about competition from the driver license centers; since they do not charge a fee for service. | Cost per center is \$350,000 for salary/benefits, supplies, rental, and maintenance. |
| Full-Service Driver and Vehicle Service | Services will be expanded at driver license centers to include a broad range of over-the-counter driver and vehicle transactions. | This PennDOT center will be in Monroe County in summer of 1996. Another is planned for Centre County. | (See New Resident Service Centers.) | Cost per center of \$350,000 for salary/benefits, supplies, rental, and maintenance. |
| PennMobile | A "mobile branch office" --the PennMobile-- which would travel along an established course to provide products to customers in rural areas. | PennDOT will decide shortly whether this effort should be a public or private venture. If money is available, the mobile unit could be operational during FY 1996-97. | None anticipated. | Estimated cost per mobile unit of \$300,000. |
| Messenger Inquiry | Messenger services transport work to the Department on behalf of their customers as well as complete applications and issue temporary registrations; have been offered the option of obtaining dial-up service to computer records for their customers. | Messengers have been in operation over 30 years. PennDOT arranged with AAMVANET to provide computer inquiry service in October 1995. As of March 1996, 40 messengers were on-line. | None | Messengers pay \$180 enrollment fee plus other fees to obtain data link up. |
| Legislative Inquiry | Will provide vehicle and driver's license information, enabling the Legislators and their aides to assist their constituents. | Data link should be accomplished May 1996. | None | No cost to PennDOT. |

Source: Developed from interviews held with PennDOT staff and information provided by the Department.

Driver License Centers Expansion Initiatives

PennDOT has 67 driver license centers, including five community driver license offices (CDLOs) throughout Pennsylvania (see Exhibit 24). PennDOT plans to automate all its driver license centers by December 1996, meaning that they will have the ability to make on-line updates to the Department's main driver license computer files. These centers do not, however, have access to PennDOT's vehicle registration system, so they cannot do vehicle registration work.

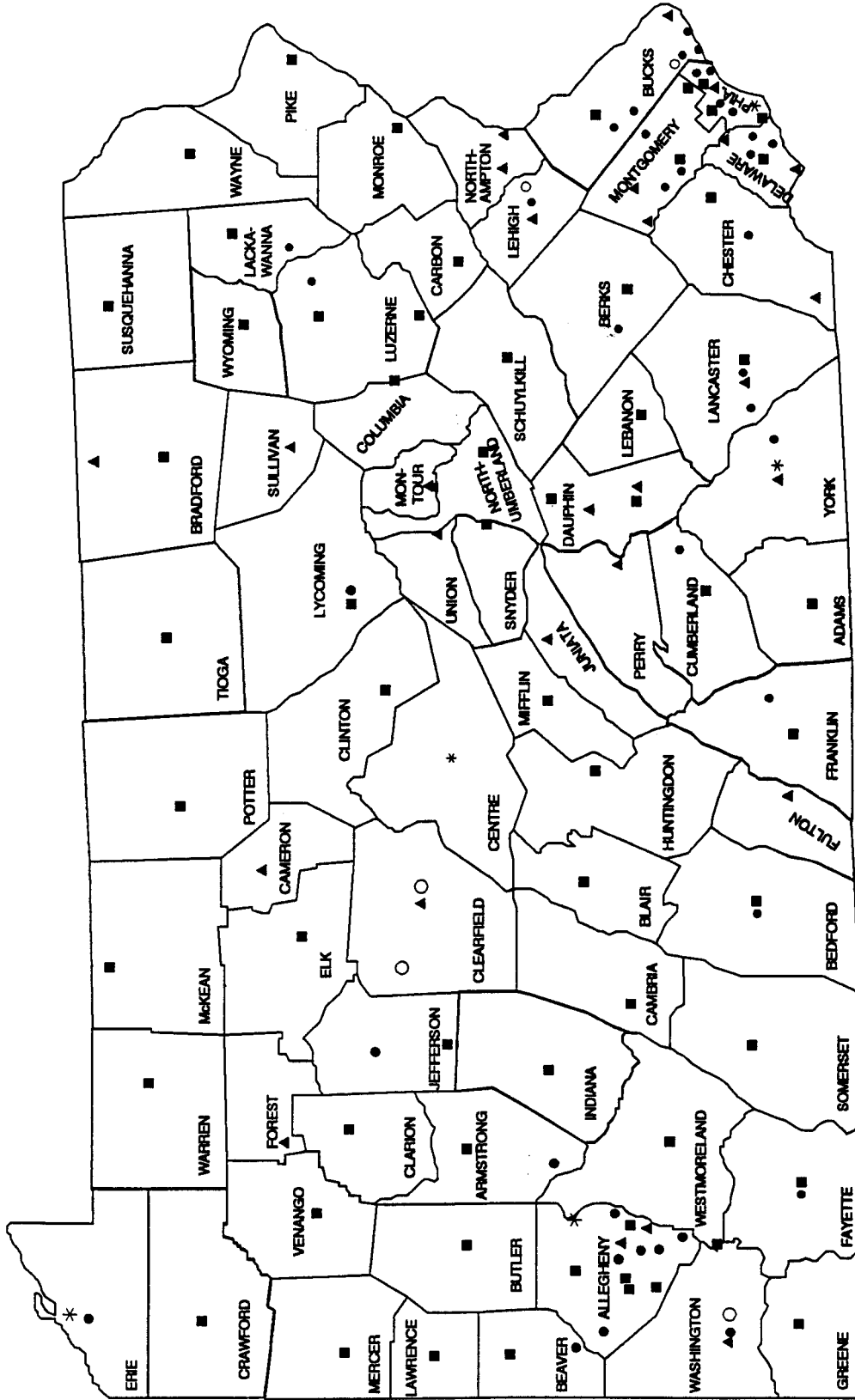
CDLOs have direct computer links to the Department's Driver License and Control System and have many data processing capabilities, including the ability to issue drivers' licenses. A 1994 study found that 78 percent of the Department's customers would use CDLOs for driver licensing services. The study concluded that:

- Customers believed that the "one-stop shopping center" concept for driver licensing activities was a useful idea.
- Most customers felt that the Community Driver License Office (CDLO) offered useful services, saved them time, and was convenient relative to other service options.
- Some minor changes in the facility design and clarification of interior signs would provide significant benefits for the CDLO.
- Offering additional services such as vehicle registration renewals, license restoration, and vehicle plate issuance would be very beneficial.

By summer 1996, PennDOT plans to expand the services offered at four driver license centers (Erie, Huntingdon Valley, Greensburg, and York) to include one-stop shopping for new residents of Pennsylvania. These centers will be equipped to assist new residents in changing their drivers' licenses and vehicle registrations. PennDOT also plans to expand the services offered at its driver license center in Snyder'sville (Monroe County) to include a broad range of over-the-counter driver and vehicle transactions. This center, is scheduled to begin operating in mid-1996, will be referred to as a "full-service driver and vehicle service center." The Department believes the expansion of services at other centers may not be necessary with the planned implementation of 30 new on-line messenger services (see below).

PennDOT is also assessing the feasibility of a traveling PennMobile to offer driver and vehicle services to persons living in the northern and southern tiers of the state who are not near a photo or driver license center. Investing in a PennMobile appears to be more cost efficient than opening additional driver license centers that are only open one or two days a week. If funds are available in FY 1996-97, the PennMobile could be on the road sometime in 1997, possibly being operated by a private contractor. PennDOT estimates the vehicle would cost about \$300,000.

Location of Driver License Services in Pennsylvania



* Community Driver License Office ○ On-Line Messenger Service Center ■ Driver License Center ▲ Photo License Center ◊ Driver Exam Center

Source: Developed from information provided by PennDOT.

Stand-Alone Photo and Driver Exam Centers

PennDOT operates 27 stand-alone photo centers and 5 stand-alone driver exam centers. The photo centers provide voter registration and camera card processing for driver licenses. Customers can also pick up driver licensing forms and manuals from these centers. The stand-alone driver exam centers only provide driver exam services.

Expansion of Messenger and Legislative Inquiry Services

Messenger services, legislators, and legislative aides have been offered a dial-up service that would provide direct access to PennDOT's mainframe computer for their customers and constituents. The Department has arranged with the American Association of Motor Vehicle Agencies Computer Network (AAMVANET) to provide for the dial-up service for messenger services that comply with their guidelines. They must have a personal computer, pay a one-time enrollment fee, and contract with AAMVANET for the service. The legislators and legislative aides will have direct access to PennDOT's mainframe.

As of March 1996, 40 messengers had on-line capability and approximately 2,000 inquiries were made per week. The legislative inquiry data link-up was to be completed in May 1996.

Problems and Issues Regarding PennDOT's Decentralization Initiatives

During the course of this audit, several concerns were expressed to us regarding the implementation of PennDOT's decentralization initiatives. These concerns are addressed below.

Realignment of Photo License and Driver Exam Facilities

Realignment of PennDOT driver licensing facilities began in January 1993 when 44 driver exam sites were transferred from the PA State Police to PennDOT. In 1994, PennDOT began consolidating the 117 photo sites and 94 driver exam sites. As of April 1996, the Department had 67 combined photo and exam sites, called driver license centers; 27 stand-alone photo centers; and 5 stand-alone driver exam sites.

The initial consolidation of the driver exam sites and the photo sites caused confusion and frustration for customers. According to the Director of the Bureau of Driver Licensing, the problem stemmed from an ambitious schedule for consolidating the centers in conjunction with the installation of new photo equipment and site security systems. Also, the timeline for news releases to the media was very short

and in some cases was not met. As a result, instructions explaining the relocations of the facilities were not adequately conveyed to the public, and at several of the old sites information was not posted to inform customers of the new location and how to get there.

To prevent this situation from reoccurring, PennDOT developed a detailed checklist of items to cover when closing a center and holds coordinating meetings prior to the relocation date. The Bureau of Driver Licensing reports that the new procedures have been used in subsequent relocations and customers were adequately informed and confusion was minimized.

Driver Exam Wait Times

PennDOT's goal is to require customers to wait no more than two weeks to schedule a driver exam skills test. We conducted a survey of 23 driver license centers in February 1996 and found that PennDOT appeared to be well within this goal, with most persons being able to make an appointment within one or two days of calling. However, in the summer months driver wait times at the centers are expected to exceed the two-week goal. For example, officials we spoke to at two driver license centers reported that, while customers now only wait a week or less to take the driver skills test, they anticipate that due to staff shortages the wait time may exceed three weeks this summer. The Department informed us that they are aware of these potential problems and plan to hire temporary employees during peak seasons for counter processing to help reduce wait times.

Travel Distance

The goal of decentralization is to make services more accessible to customers. We therefore measured the distance from driver license centers located in the northern and southern tiers of Pennsylvania to the farthest town located in that region. We found that in the southern tier the longest traveling was for persons living in Delta in York County who had to travel 34 miles (42 if they used the interstate) to the nearest driver license facility, with travel times of up to an hour depending on traffic conditions. Two other York County towns require at least a 45 minute driving time. In the northern tier, the longest distance we measured from a town to a driver license center was 32 miles. The PennMobile (discussed above) could make driver license services more accessible to customers living in these rural areas. The Department also noted they are exploring the possibility of a stand alone center for southeastern York County.

Condition of Facilities

PennDOT is planning to spend \$2.7 million on 18 driver license center projects. The projects include:

- enlarging seven driver license centers to adequately handle the consolidated driver exam and photo license operations;
- expanding three driver license centers to accommodate the large customer volume and to increase parking for customers;
- performing basic maintenance at six centers, such as repairing leaking roofs, and improving the centers' general appearance;
- finding a new location for the Pittsburgh Washington Boulevard driver license center, because the Pennsylvania State Police plans to evacuate the facility in July 1996; and
- establishing a new driver license center in south Philadelphia.

PennDOT is currently working on 5 of the 18 projects. The remaining projects are planned for FY 1996-97.

In addition, PennDOT's headquarters for driver and vehicle services will relocate to a newly constructed building at 1101-1125 South Front Street in Harrisburg in September 1996. The building will include a full-service customer service center, a special business customer service area, and increased parking. PennDOT is leasing this space for approximately \$3 million per year for ten years.

Privatization Initiatives

PennDOT has privatized several driver license and vehicle functions to make service delivery more convenient to customers. Other privatization initiatives are also being considered. The contractor/private business is responsible for most of the costs associated with operating the business, with the customer typically paying a fee for the service received. Exhibit 25 summarizes the Department's privatization initiatives.

On-Line Messenger Services

Through a computer link with PennDOT's central office, 17 on-line messenger services provide noncommercial driver's license and vehicle registration renewals, address changes, replacement drivers' licenses, license plates, registration cards, and stickers. One of these messenger services can also issue camera cards, renew heavy truck registrations, process duplicate titles, and provide special license plates. Thirteen of the 17 on-line messenger services will be expanded to offer these services by the end of summer 1996. In addition to PennDOT's normal fees, customers pay an additional charge, set by each on-line messenger, for such on-the-spot service.

PennDOT plans to add 22 more on-line messenger services by December 1996 (see Exhibit 24). A 1994 study found that 36 percent of the respondents surveyed

PennDOT Privatization Initiatives

| <u>Type of Service</u> | <u>Type of Work</u> | <u>Status</u> | <u>Issues</u> | <u>Cost</u> |
|---|---|--|--|--|
| On-Line Messenger Service Pilot | Private services providing some over-the-counter driver licensing and vehicle registration services, including renewals, changes of address, requests for duplicates or replacements, issuance of special fund plates, and letters outlining restoration requirements for customers. Customers pay a fee. | Started in 1993 with 17 by April 1996. The goals is to have 22 more on line by December 1996. | Creates competition for messenger center and other messengers who do not have automated services. | No cost to PennDOT. The messengers set their own fee. Cost for equipment is between \$22,000 and \$25,000. |
| Third-Party Computer Services at Car Dealership | Allows car dealers to request information from PennDOT's computer as well as send information to update title and registration files. Dealers would issue customers their permanent registration card, sticker, and plate. Titles would be mailed from Harrisburg. | Started in 1994 with pilot in Jenkintown. Terminated in November 1995. By June 1996, PennDOT hopes to have an agreement with another third party host to continue this program. Goal is to allow more car dealers and fleet owners to gain access by 1997. | Customers do not see the advantage of leaving the car dealership with permanent license tags as opposed to temporary tags. | No cost to PennDOT. Dealers could charge a fee up to \$40 for this service. A separate fee for the process may be passed on to the customer. |
| Self-Service Telephone Renewal Pilot | Would allow, via a private contractor, the customer to renew a driver's license or vehicle registration using a credit card. Customers would call an 800 number and would enter the necessary information by phone. | RFP to be issued by fall 1996. | Requires Treasury Department review of method of using a credit card and transfers of funds. | No cost to PennDOT; customer will have to pay a fee. |
| Automated Teller Machine (ATM) Renewal Pilot | Operated through a private contractor; would allow the customer to renew driver's license or vehicle registration via ATM and credit or debit cards. | In 1994 pilot service in the customer service area of Transportation and Safety Building. PennDOT is not pursuing at this time. | Requires Treasury Department review of method of using credit card, and customer assistance may be needed. | NA |

Exhibit 25 (Continued)

| <u>Type of Service</u> | <u>Type of Work</u> | <u>Status</u> | <u>Issues</u> | <u>Cost</u> |
|--|--|--|--|---|
| Driver Information Pilot | Allows car rental agencies on-line access to renters' driving records, allowing them to screen out prospective renters with suspended licenses or serious traffic offenses. This service is provided via TML Information Services, Inc., Forest Hills, NY, a private contractor. | In 1994, service was piloted with Alamo and Dollar Rent-A-Car. By fall 1996, PennDOT expects to issue an RFP to expand scope of pilot. | Some complain this search is an invasion of the driver's privacy, however, it meets business interests of rental agency. | No cost to PennDOT. PennDOT will receive \$5 for each access to its drivers' records. |
| Driver Education End-of-Course Skills Test | Driver education teachers will administer PennDOT on-road examination. Students who successfully complete the examination will not be required to go to a driver license center for a skills test. | In 1995, 50 school districts were invited to participate in the pilot examination; 25 accepted. Training of drivers was completed March 1996. In May 1996, another 50 school districts were invited to participate in Phase II of the pilot. | None anticipated. | No cost to PennDOT. |
| Telephone Information Center | PennDOT's telephone information center answers on average 6,222 calls a day through customer service representatives and an automated response system. | PennDOT has increased the number of hours during which the phones are covered. Starting in February 1996, the TIC is open until 9:00 p.m. A private contractor has been selected and will begin operating TIC September 1996. | None anticipated. | Estimated contract cost for FY 1996-97 is \$4,000,000. |

Source: Developed from interviews held with PennDOT staff and information provided by the Department.

would be willing to use on-line messenger services. PennDOT estimates that these sites would process less than 1 percent of all driver's license and motor vehicle transactions.

Registration and Titling Services at Car Dealerships

In November 1995, PennDOT concluded its pilot program for on-line registration and titling at car dealerships. This service would allow car dealers to enter vehicle registration and title information through a third party computer "gateway." As a result of the pilot, PennDOT found that, although the service worked technically, it provided little value to the dealer. Car buyers did not appear to place much value in leaving the car dealership with permanent metal license plates, registrations, and tags as opposed to temporary tags.

PennDOT plans to pursue this service but with a restructuring to make the project beneficial to all parties involved. The Department also notes that these services help reduce the Department titling and registration processing by at least 10 percent. The Department hopes to enter into agreements with those entities interested in serving as a third party host by June 1996. PennDOT estimates that it will cost dealerships at least \$20,000 for the equipment. Car dealerships can charge customers a fee for processing registration and title documents.

Self-Service Telephone Renewal Pilot

PennDOT is exploring the idea of allowing drivers' licenses and vehicle registrations to be renewed through a credit card and an 800 number. If this service is offered, it would be through a private contractor. PennDOT reports that 23.6 percent of its customers support the idea of entering their renewal information at home. However, PennDOT cannot implement such a service until the Treasury Department reviews the issues involved in using credit cards for payment and transfer of funds. The two departments are working together to develop a generic RFP that all state agencies can use to accept credit card payments for their products and services. PennDOT hopes that such an RFP will be approved by fall 1996.

Automated Teller Machine (ATM) Renewal Pilot

PennDOT has also explored the possibility of allowing customers to renew their driver's license or vehicle registration by using ATM and credit or debit cards. PennDOT piloted this service in the customer service area of the Transportation and Safety Building but encountered certain complications. The customers required assistance in using the ATM, and because the ATM did not accept money, a PennDOT employee had to be available to receive cash. Although PennDOT found that 18 percent of its customers would use this option, it believes that the ATM service is too complicated and improved technology is needed before it can be implemented.

Driver Information Pilot

PennDOT, via a private contractor, now allows car rental agencies on-line access to renters' driving records. This service, which is currently available in Philadelphia, allows the rental agencies to screen out prospective renters with suspended licenses or serious traffic offenses. The Department plans to make this service available to insurance companies and other businesses, such as trucking companies and fleet owners. As of April 1996, PennDOT was drafting an RFP to recruit potential companies to serve as a computer "gateway" between PennDOT and the rental agencies, insurance companies, and other businesses interested in the service. PennDOT anticipates that the RFP will be available by fall 1996. Although this service may be unpopular among drivers with poor driving records, PennDOT sees it as an opportunity to help keep suspended drivers off the road and to promote highway safety.

End-of-the-Course Driver Skills Test

PennDOT has developed and implemented its driver education end-of-the-course skills test. This examination, which is equivalent to PennDOT's on-road examination, is administered by driver education teachers. Students who successfully complete the examination will not be required to take the PennDOT skills test. As of April 1996, 50 school districts had been invited to participate in the program, with 25 school districts responding favorably. PennDOT recently invited 50 more schools that contract with private training programs to participate in the program. The Department expects at least half will participate. If the experience with the first 25 school districts is favorable, PennDOT plans to contract with additional schools to offer this program.

Telephone Information Center Service Improvements

PennDOT's Telephone Information Center answers an average of 6,222 calls a day. The Department has issued an RFP to solicit a private business to upgrade service and customer satisfaction levels. The RFP was issued in December 1995 and on March 25, 1996, a contractor was selected to privatize this function. (See Finding B3 for further discussion on the telephone information center.)

Recommendation

- 1. The Department should develop goals for acceptable maximum driving times and/or mileage distances to its various driver license centers. Areas outside these zones should be targeted for PennMobile services.**

FINDING B3

PennDOT Plans to Privatize Its Telephone Information Center to Improve Operations

Summary: PennDOT's Telephone Information Center (TIC) has experienced busyouts for its 800 customer service lines ranging from 6.6 million to 7.3 million times annually. Customer difficulty in reaching an operator or the Voice Processing System (VPS) has generated many complaints, prompting PennDOT to contract for such services. As of May 1996, PennDOT had chosen a contractor and hoped to have a contract signed by mid-June 1996. The contractor proposes to reduce the problem of busyouts through new technologies, extending operator hours, and expanding the number of 800 lines.

PennDOT's Telephone Information Center (TIC) provides direct citizen and business contact to the Bureau of Motor Vehicles (BMV) and the Bureau of Driver Licensing (BDL). A special Driver Exam Unit schedules driver testing, special point exams, and hearings. The TIC provides telephone access to live operators weekdays, while the Department's Voice Processing System (VPS) offers 24-hour service to customers with commonly asked questions through menus leading to pre-recorded messages.

The TIC operates from 7:00 a.m. to 9:00 p.m. with about 48 full-time and 35-50 part-time customer service staff. Callers can contact the VPS via 23 toll-free lines, 11 Philadelphia local lines, 7 Pittsburgh local lines, and a number of lines on a Harrisburg local number. Customers can also speak to an operator through four toll-free lines or three local numbers for Commercial Driver Licensing questions. The Exam Scheduling Unit employs a staff of 13 customer service representatives.

The TIC began in 1982 with 50 customer service representatives answering an 800 number. PennDOT installed a Voice Processing System (VPS) in July 1992 and expanded it in 1993. Despite these and other initiatives, the Telephone Information Center still averages six million to seven million busy signals a year on the 800 service.¹ The Department has received information from AT&T that a caller may have to try up to 75 times before being able to speak to an operator.

¹PennDOT's 800 numbers are printed in convenient places such as the blue pages of telephone books and at driver licensing exam centers and written on much of the routine correspondence coming out of PennDOT. Persons call as a result of certain types of correspondence to customers (for example, financial responsibility letters). They also call in relation to natural disasters such as floods and snow and from events such as the fire in the Transportation and Safety Building and because the customer cannot understand PennDOT forms.

Calls to the Telephone Information Center Can Help Identify Other Problems

Although the Telephone Information Center does not maintain statistics on why callers are calling, TIC staff reported that many of the calls result from the complexity of the Department's forms or result from other situations that could be alleviated through improved procedures. For example:

- PennDOT has over 120 forms for its customers, some of which have not been revised in over 15 years. Complex forms generate calls initially, when the customer gets confused, or in time, after the customer sends PennDOT a form which is incomplete or in error and it is then returned to the customer.
- PennDOT changed the driver licensing center test locations in November 1995. The form gave the TIC number but did not list the new test location telephone numbers.
- Until last fall, as part of vehicle registration renewal PennDOT sent notices regarding lack of financial responsibility to selected audited vehicle owners, many of whom simply changed insurance companies (see Finding B6).

PennDOT's Deputy Secretary for Safety Administration reports undertaking a review of all forms to make them more "user friendly." The TIC also has an Employee Advisory Group (EAG) to identify areas where Department forms or procedures are creating problems for its customers and to suggest ways to improve services.

The TIC also uses a crisis report to correct problems. When a telephone operator notices that there are a lot of questions with a common theme, a crisis report is referred to the pertinent supervisor in PennDOT. Additionally, both BMV and BDL keep folders on all forms used by the Bureau and place suggestions for changes in that folder. These suggestions are reviewed prior to ordering reprints.

PennDOT's Plan to Privatize

As of May 1996, PennDOT was completing its negotiations with Diversified Data Services (DDS) to provide services now provided by the Telephone Information Center. This initiative is designed to increase the number of answered calls and realize a cost savings over time. The Department noted that total contract costs are just under \$17 million for five years.

The RFP calls for the contractor to upgrade service and increase customer satisfaction levels by implementing a system that will handle more voice processing calls, 800 numbers, and direct calls; implement Interactive Voice Response processing; and increase the number of days on which operators are available. The Cus-

tomers Call Facility is to be located in Pennsylvania, callers are to wait in queue for no more than 60 seconds, and the contractor is to have the capability to answer a minimum of 2,000 additional calls per day over what PennDOT presently averages. According to TIC's director, continuous quality improvement mechanisms currently in use at PennDOT can be expected to be continued, but this issue was not specifically addressed in either the RFP or the draft contract.

Recommendation

- 1. PennDOT should attempt to modify its draft contract with its proposed telephone center vendor to ensure that it receives statistical reports on the types of problems that are generating calls and recommendations from those receiving the calls on how these problems could be alleviated.**

FINDING B4

Vehicle Registration and Driver's License Fees Have Not Been Increased Since 1975

Summary: PennDOT's driver's license and vehicle registration fees have not been increased since 1975. At \$24 every four years, Pennsylvania's driver's license fee is already among the nation's highest. The cost to register a passenger vehicle in Pennsylvania, however, is among the nation's lowest. The cost to register trucks is also low to average among the states. If the annual registration fee for passenger vehicles and light trucks were raised to the inflation-adjusted rates of \$66, \$107 (up to 5,000 lbs), and \$149 (5,001 to 7,000 lbs.), an additional \$372 million would be generated for the Motor License Fund.

PennDOT's fees for annual vehicle registrations and drivers' licenses are established in statute at 75 Pa.C.S.A. §1912 and §1951, respectively. The annual passenger vehicle registration fee is \$24 as set in Act 1975-149. This act also set the annual fee for a driver's license at \$5 (plus the cost of the photograph which was added by Act 1994-115). Since the driver's license is renewed every four years, the fee is \$20 (plus \$4 for the photograph). In 1994 dollars, the equivalent renewal fees per year would have been \$66.11 for vehicle registrations and \$13.77 for drivers' licenses (\$55 every four years excluding photograph fees).

Because driver's license and vehicle registration fees have not changed since 1975, we sought to assess how Pennsylvania compared to other states. In April 1996 PennDOT conducted a comparative analysis of other states' fees. The PennDOT data, as presented in Table 21, shows that the average annual fee for renewing a non-commercial driver's license (i.e., regular driver's license) and for a Class A (i.e., commercial driver's license) is \$3.90 and \$16.00, respectively. Only three states charge more than Pennsylvania for a regular or commercial driver's license. (See Appendix F.)

Table 21

Driver's License Renewal Fees

| | (Non Commercial) <u>Yearly Cost</u> | (Commercial Class A No Endorsements) <u>Yearly Cost</u> |
|-----------------------------------|--|---|
| Average Fee..... | \$3.90 | \$ 9.13 |
| Pennsylvania Fee..... | 6.00 | 16.00 |
| Pennsylvania Rank..... | Tied for 4th | 4th |
| States Charging More Than PA..... | 3 | 3 |

Source: Developed from information provided by PennDOT.

The Department also obtained registration fee information for four typical passenger vehicles. In 33 states, vehicle owners must pay a registration renewal fee plus one or more other fees, such as an issuance fee, ad valorem (value added) tax, personal property fee, excise tax, or a processing fee. In Pennsylvania, the District of Columbia, and 16 other states the vehicle owner only pays a registration fee. As shown in Table 22, the cost to register a vehicle in Pennsylvania is markedly lower than most other states. Pennsylvania ranks 45th of the 50 states and the District of Columbia (depending on the type of vehicle purchased). For example, the average cost to register a 1994 Ford Taurus is \$215.99 nationally but only \$24 in Pennsylvania. (See also Appendix G for more information on all 50 states.)

Table 22

| Cost to Register a Vehicle | | | | |
|--------------------------------------|-----------------------------------|----------------------------|----------------------------------|---------------------------|
| | 1994 Chevrolet <u>Cavalier</u> | 1994 Ford <u>Taurus</u> | 1994 Buick <u>Park Avenue</u> | 1994 <u>Ford F-150</u> |
| Average Fee..... | \$151.95 | \$215.99 | \$279.21 | \$174.03 |
| Pennsylvania Fee..... | 24.00 | 24.00 | 24.00 | 39.00 |
| Pennsylvania Rank | 42nd | 45th | 45th | Tied for 44th |
| States Charging More Than PA..... | 41 | 44 | 44 | 43 |

Source: Developed from information provided by PennDOT.

The other state comparison also suggests that Pennsylvania's annual truck registration fees are low to average among the states. For a 26,000 pound truck, Pennsylvania's fee at \$315 ranks 26th among the states with a range of \$85 (Georgia) to \$1,120 (California). As regards heavier trucks (80,000 lbs.), Pennsylvania's fees (\$1,125) were 32nd among the states with Washington first at \$3,038, and Idaho lowest at \$120.

Pennsylvania has about 6.66 million registered passenger vehicles, so if vehicle registration fees were doubled (\$48), it would generate an additional \$160 million. If it were raised to \$66 annually (the inflation-adjusted figure) it would yield \$440 million annually, \$280 million more than the \$24 fee. An annual registration fee of \$150, which would be close to the national average for a moderately priced late model vehicle, would generate \$999 million annually, \$839 million more than the \$24 fee. If light truck (up to 7,000 lbs.) registration fees were also increased to adjust for inflation (\$107 for light trucks; \$149 for trucks weighing 5,001 to 7,000 lbs.), an additional \$92 million in revenues would be realized. Annual registration fees for heavier trucks range from \$102 (7,001 to 9,000 lbs.) to \$1,125 (80,000 lbs.), and these fees may also warrant increases.

Exhibit 26 shows the registration fees for all classes of vehicles, the number of these vehicles registered in calendar year 1995, and the amount of additional revenue that would be generated if all fees were increased by \$24.

Recommendation

- 1. The General Assembly should consider raising some or all annual vehicle registration fees as a way to generate additional revenue for the Motor License Fund. Consideration should also be given to varying these fees depending on the value of the vehicle being registered.**

Exhibit 26

1995 Vehicle Registration Summary

| <u>Category</u> | <u>Fee</u> | <u>Count</u> | <u>Additional Revenues Realized From \$24 Increase</u> |
|--------------------------------|-----------------|--------------|--|
| Passenger | \$ 24.00 | 6,664,258 | \$159,942,192 |
| Spec Mobile Equip..... | 24.00 | 22,975 | 551,400 |
| Impl. of Husbandry..... | 12.00 | 364 | 8,736 |
| <u>Housecars</u> | | | |
| 8000 or less lbs..... | 30.00 | 22,029 | 528,696 |
| 8001 to 11,000 lbs. | 42.00 | 15,271 | 366,504 |
| 11,001 or more lbs..... | 54.00 | 15,668 | 376,032 |
| Regular Motorcycle | 12.00 | 170,322 | 4,087,728 |
| Motorized Pedalcycle | 6.00 | 3,290 | 78,960 |
| Motor Driven Cycle | 6.00 | 1,528 | 36,672 |
| School Bus | 24.00 | 23,827 | 571,848 |
| Omni Bus..... | Charged by Seat | 7,543 | 181,032 |
| Bus..... | Charged by Seat | 6,298 | 151,152 |
| Mass Transit Bus..... | Charged by Seat | 5,318 | 127,632 |
| ARP Bus..... | Charged by Seat | 119 | 2,856 |
| Taxi..... | 36.00 | 2,610 | 62,640 |
| <u>Trailers</u> | | | |
| 3,000 or less lbs..... | 6.00 | 448,551 | 10,765,224 |
| 3,001 to 10,000 lbs. | 12.00 | 140,479 | 3,371,496 |
| 10,001 or more lbs..... | 27.00 | 104,118 | 2,498,832 |
| <u>Trucks</u> | | | |
| 5,000 or less lbs..... | 39.00 | 990,044 | 23,761,056 |
| 5,001 to 7,000 lbs. | 54.00 | 263,753 | 6,330,072 |
| 7,001 to 9,000 lbs. | 102.00 | 79,228 | 1,901,472 |
| 9,001 to 11,000 lbs. | 132.00 | 73,570 | 1,765,680 |
| 11,001 to 14,000 lbs. | 162.00 | 9,804 | 235,296 |
| 14,001 to 17,000 lbs. | 192.00 | 20,438 | 490,512 |
| 17,001 to 21,000 lbs. | 237.00 | 12,852 | 308,448 |
| 21,001 to 26,000 lbs. | 270.00 | 27,338 | 656,112 |
| 26,001 to 30,000 lbs. | 315.00 | 15,627 | 375,048 |
| 30,001 to 33,000 lbs. | 378.00 | 19,107 | 458,568 |
| 33,001 to 36,000 lbs. | 414.00 | 8,265 | 198,360 |
| 36,001 to 40,000 lbs. | 438.00 | 4,167 | 100,008 |
| 40,001 to 44,000 lbs. | 465.00 | 1,603 | 38,472 |
| 44,001 to 48,000 lbs. | 501.00 | 2,646 | 63,504 |
| 48,001 to 52,000 lbs. | 552.00 | 4,920 | 118,080 |
| 52,001 to 56,000 lbs. | 588.00 | 6,696 | 160,704 |
| 56,001 to 60,000 lbs. | 666.00 | 9,720 | 233,280 |
| 60,001 to 64,000 lbs. | 741.00 | 1,163 | 27,912 |
| 64,001 to 68,000 lbs. | 777.00 | 1,763 | 42,312 |
| 68,001 to 73,280 lbs. | 834.00 | 19,445 | 466,680 |
| 73,281 to 76,000 lbs. | 1,065.00 | 207 | 4,968 |
| 76,001 to 78,000 lbs. | 1,089.00 | 397 | 9,528 |
| 78,001 to 78,500 lbs. | 1,101.00 | 135 | 3,240 |
| 78,501 to 79,000 lbs. | 1,113.00 | 80 | 1,920 |
| 79,001 to 80,000 lbs. | 1,125.00 | 39,001 | 936,024 |
| Limousine | Charged by Seat | 1,388 | 33,312 |
| Other (Antique, Classic) | Varies | 4,592 | 110,208 |
| Total..... | | 9,272,517 | \$222,540,408 |

Source: PennDOT Bureau of Motor Vehicles.

FINDING B5

PA's Truck Fuel Tax and Registration Programs Have Improved but Additional Attention Is Needed on the Truck Safety (MCSAP) Enforcement Program

Summary: Truck safety inspections are conducted by PennDOT, the State Police, and the Public Utility Commission. In part, due to federal cutbacks, the number of such inspections fell from 55,926 in FY 1990-91 to 38,148 in FY 1993-94 before returning to 50,441 in FY 1994-95. We also found that PennDOT has agreed to participate in an interstate Commercial Vehicle Safety Alliance (CVSA) program to coordinate safety inspections between states, but that Pennsylvania inspectors appear to have little confidence in the program and often do not issue CVSA decals or exempt trucks with CVSA decals from repeat inspections. Finally, two new truck registration programs (IFTA and IRP) appear to have improved administrative efficiency in collecting motor carrier fuel taxes and registration fees.

PennDOT participates in the federal Motor Carrier Safety Assistance Program (MSCAP) to ensure that trucks are mechanically safe and that their drivers are operating safely and according to regulations. The Department has also agreed to participate in a national safety inspection program, known as the Commercial Vehicle Safety Alliance, whose goal is to improve coordination among states in truck safety inspections. These two programs, along with two new programs for improving collections of motor carrier fuel taxes (IFTA) and registration fees (IRP), are discussed below.

Motor Carrier Safety Assistance Program

The Motor Carrier Safety Assistance Program (MCSAP) is a federally funded program that provides grants for motor carrier safety enforcement activities. Historically, the MCSAP program has focused on roadside inspections and motor carrier reviews. However, the introduction of the Drug Interdiction Assistance Program and other special projects, such as traffic enforcement, hazardous materials training, and out-of-service verification activities, have broadened the scope of the program. PennDOT is the lead agency for the Commonwealth's MCSAP enforcement effort, but the Pennsylvania State Police (PSP) and the Pennsylvania Public Utility Commission (PUC) also conduct roadside MCSAP inspections. MCSAP's goal is to reduce the number and severity of highway accidents and hazardous materials incidents involving commercial vehicles.

Table 23 presents information on the trend in tractor trailer accidents in Pennsylvania since 1990. The table shows that the increase in the number of such truck accidents (10 percent) has been approximately equivalent to the increase in truck traffic over the same time period (11 percent). The three most common causes of truck accidents are tailgating, speeding, and insufficient pull-off on state highways, none of which are due to mechanical malfunctions.

Table 23

Pennsylvania Tractor Trailer Accident Statistics
(1990 Through 1994)

| | <u>1990</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>% Change 1990-1994</u> |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------------------------|
| # of Accidents | 4,185 | 3,792 | 3,881 | 3,989 | 4,607 | 10.0% |
| # of Fatalities | 128 | 144 | 127 | 123 | 145 | 13.3 |
| # of Injuries | 3,711 | 3,345 | 3,322 | 3,397 | 3,724 | 0.4 |
| Truck Miles (Billions) | 6.360 | 6.490 | 6.780 | 6.900 | 7.068 | 11.1 |

Source: Developed from annual MCSAP State Enforcement Plans submitted to the Federal Highway Administration.

Number of MCSAP Inspections

PennDOT undertakes substantially fewer inspections than the State Police and PUC even though it is the designated lead agency. This is because PennDOT's Motor Carrier Enforcement Teams (MCET) are also responsible for truck weight enforcement, which is a higher priority within the Department (see Finding A12). In an effort to enhance truck safety, in 1995 PennDOT increased the minimum number of MCSAP inspections its Motor Carrier Enforcement Officers are expected to complete from eight inspections a month to twelve. The PSP requires troopers assigned to the MCSAP inspection program to be available for inspections 16 hours a month. The PSP reports it is in the process of changing this requirement to a minimum of 72 inspections per month.

Commercial vehicles and drivers can be cited for hundreds of potential violations, including hazardous materials, paperwork, and operating or safety equipment violations. Depending on the type of violations found, MCSAP inspectors can issue citations and/or place individual trucks out of service. A truck placed out of service may not proceed until the safety violation is corrected. If a truck is found to be mechanically safe but the driver has exceeded the maximum number of allowable

hours on the road without a break, he or she is not allowed to proceed until having rested the prescribed number of hours.

Table 24 presents information on the number of MCSAP inspections undertaken by PennDOT, the PUC, and the PSP. As the table shows, in FY 1994-95 PennDOT conducted 7,979 (16 percent) of the MCSAP inspections while the PUC and PSP accounted for 44 and 40 percent, respectively. The table also shows that the number of MCSAP inspections dropped from 55,926 in FY 1990-91 to 38,148 in FY 1993-94, due primarily to fewer inspections by the State Police and the Public Utility Commission. According to MCSAP officials, the PSP and PUC conducted fewer inspections in part due to a decrease in the federal funds PennDOT had available to conduct the inspections and to the reduction in available overtime funding. Because the MCSAP program is a federal initiative, PennDOT only conducts as many inspections as federal funding for the program allows.

Table 24

MCSAP Inspections and Trucks Placed Out of Service*

| <u>Agency</u> | <u>1989-90^a</u> | <u>1990-91</u> | <u>1991-92</u> | <u>1992-93</u> | <u>1993-94</u> | <u>1994-95</u> |
|-------------------------|----------------------------|----------------|----------------|----------------|----------------|----------------|
| PennDOT | | | | | | |
| Inspections | 5,970 | 7,839 | 7,592 | 8,898 | 7,880 | 7,979 |
| Out of Service | 20 | 27 | 675 | 2,203 | 2,543 | 2,582 |
| Percent OOS | 0.3% | 0.3% | 8.9% | 24.8% | 32.3% | 32.4% |
| PUC | | | | | | |
| Inspections | 18,898 | 19,061 | 19,319 | 21,238 | 16,423 | 22,163 |
| Out of Service | 47 | 121 | 3,355 | 5,097 | 5,541 | 7,058 |
| Percent OOS | 0.2% | 0.6% | 17.4% | 24.0% | 33.7% | 31.8% |
| PSP | | | | | | |
| Inspections | 26,340 | 29,026 | 22,578 | 18,026 | 13,845 | 20,299 |
| Out of Service | 8,011 | 18,761 | 12,854 | 8,097 | 4,060 | 5,055 |
| Percent OOS | 30.4% | 64.6% | 56.9% | 44.9% | 29.3% | 24.9% |
| Total | 51,208 | 55,926 | 49,489 | 48,162 | 38,148 | 50,441 |
| Overall OOS..... | 16% | 34% | 34% | 32% | 32% | 29% |

*Local police may also inspect trucks once they have been trained and certified by the state.

^aFY 1989-90 includes data for February 1990 through June 1990. Data for the months prior to February 1990 was unavailable.

Source: Inspection data provided by PennDOT's Division of Motor Carrier Safety.

Table 25 shows the total number of violations uncovered, number of out-of-service violations, and the face value of fines issued.

Table 25

Safety Violations Found as a Result of MCSAP Inspections

| <u>Fiscal Year</u> | <u>Number of Violations Documented</u> | <u>Number of Out-of-Service Violations</u> | <u>Face Value of Fines Issued</u> |
|--------------------|--|--|-----------------------------------|
| 1990-91 | 236,841 | 42,947 | \$1,350,000 |
| 1991-92 | 197,789 | 35,060 | 1,320,000 |
| 1992-93 | 166,727 | 28,922 | 1,330,000 |
| 1993-94 | 145,302 | 25,484 | 1,340,000 |
| 1994-95 | 195,106 | 30,533 | 1,338,000 |

Source: Inspection data provided by PennDOT's Division of Motor Carrier Safety. See also Appendix H for specific categories of violations.

Covert Truck Audits

The federal government has encouraged the use of covert audits by states in order to ensure that trucks placed out of service are repaired before they are moved. Since FFY 1991, Pennsylvania's MCSAP agencies (PennDOT, PSP, and PUC) have undertaken a limited number of such audits in which a MCSAP inspector is discretely located up the road from where the truck has been placed out of service. Vehicles that leave the inspection site during the surveillance period are then stopped and reinspected to determine whether the defects have been corrected. Vehicles and/or their drivers found to be in violation of the initial out-of-service order are again placed out of service and may be issued a citation with a fine of \$500.

Covert audits are done by the PSP and typically involve overtime hours. To help states fund the costs of covert audits, in FFY 1995 the FHWA designated \$39,951 to Pennsylvania specifically for this purpose. In FFY 1996 the FHWA has designated \$63,350 to Pennsylvania for covert audits.

New Technologies

Many truck companies are installing on-board computers in their fleets which allow them to monitor the miles a truck has been driven and the speed of the truck. This allows the companies to better track the performance of their drivers and could also be helpful to MCSAP inspectors.

According to the Director of the Division of Motor Carrier Safety, in three to five years transponders could be placed in trucks that would automatically allow access by MCSAP inspection staff to information about that truck. For example, information on the cargo, miles the truck has been driven, last inspection date, and whether the apportioned registration fees and fuel taxes have been paid could potentially be available for inspection. It would enhance the inspectors' knowledge of particular trucks and allow for identification of problem trucks. Better tracking of trucks transporting hazardous materials is also a possibility in the future through the use of satellite technology. While both State Police and PennDOT officials pointed out the importance of new technologies in improving and enhancing the MCSAP program, no specific plans have been developed to integrate such emerging technologies. However, plans to purchase mobile computers to streamline MCSAP forms and paperwork requirements were underway as of May 1996.

Commercial Vehicle Safety Alliance (CVSA)

The CVSA is an association of state, provincial, and federal officials responsible for the administration and enforcement of motor carrier safety laws in the United States, Canada, and Mexico. In the early years of the federal MCSAP program, Pennsylvania had not joined the CVSA, but did so, according to PennDOT's truck safety manager, because the FHWA was encouraging states to do so and because it was an appropriate national truck safety organization to join.

In 1987 PennDOT signed a Memorandum of Understanding (MOU) agreeing to follow the standards established by the members of the CVSA. Among the conditions placed on members is the responsibility to honor CVSA inspection decals "affixed to a vehicle by all authorized agencies." It further agrees that CVSA decals will be "affixed to those vehicles which pass the level 1 CVSA inspection with no violations."

The decal certifies to other inspectors that the truck has passed a safety inspection within the last 90 days and presumably would not need to be reinspected if stopped while the sticker is valid. However, as shown in Table 26, Pennsylvania (along with several other states) often does not issue CVSA decals even for trucks that pass the Commonwealth's most comprehensive (Level 1) inspections; Pennsylvania was found to issue a CVSA decal only about half the time.

Table 26

Commercial Vehicle Safety Alliance Decals Issued
(October 1994 through July 1995)

| <u>State</u> | <u>Level 1 Inspections^a</u> | <u>Passed Level 1 Inspection: CVSA Decal Issued</u> | <u>Passed Level 1 Inspection: CVSA Decal Not Issued</u> | <u>Percent Passed: No Decal Issued</u> |
|---------------------|--|---|---|--|
| Pennsylvania | 10,611 | 288 | 306 | 52% |
| Georgia | 4,604 | 407 | 319 | 44 |
| Michigan..... | 7,487 | 349 | 183 | 34 |
| Minnesota..... | 5,130 | 399 | 190 | 32 |
| Maryland..... | 15,703 | 1,774 | 642 | 27 |
| West Virginia | 4,904 | 1,650 | 553 | 25 |
| Massachusetts..... | 7,654 | 1,719 | 456 | 21 |
| Texas | 2,539 | 287 | 57 | 17 |
| Illinois | 7,394 | 2,875 | 450 | 14 |
| New Jersey..... | 5,843 | 1,238 | 92 | 7 |
| Virginia | 6,551 | 2,514 | 179 | 7 |
| Missouri..... | 24,383 | 4,709 | 223 | 5 |
| New York | 9,910 | 3,440 | 122 | 3 |
| Ohio | 10,426 | 4,829 | 146 | 3 |
| Indiana | 12,957 | 5,368 | 89 | 2 |

^aLevel 1 inspections are the most comprehensive.

Source: Developed from a report issued by the CVSA to its members.

Table 27, shows that Pennsylvania issued far fewer CVSA decals in FY 1994-95 than during the early 1990s.

Table 27

CVSA Decals Issued by PA MCSAP Inspectors

| <u>Fiscal Year</u> | <u># of Inspections Passed (No Violations)</u> | | | | <u>Total CVSA Decals Issued</u> | <u>Decals Issued as a % of Passed Inspections</u> | | |
|--------------------------|--|------------|------------|--------------|---|---|------------|------------|
| | <u>DOT</u> | <u>PSP</u> | <u>PUC</u> | <u>Total</u> | | <u>DOT</u> | <u>PSP</u> | <u>PUC</u> |
| 1990-91..... | 1,101 | 3,141 | 2,321 | 6,563 | 2,008 | 53% | 24% | 28% |
| 1991-92..... | 1,318 | 2,596 | 3,390 | 7,304 | 3,056 | 48 | 43 | 39 |
| 1992-93..... | 1,984 | 3,004 | 4,070 | 9,058 | 3,159 | 41 | 32 | 34 |
| 1993-94 ^a ... | 1,543 | 1,743 | 2,331 | 5,617 | 1,504 | 31 | 23 | 27 |
| 1994-95 ^a ... | 1,308 | 2,300 | 2,790 | 6,398 | 1,638 | 24 | 24 | 28 |

^aData for FY 1993-94 and FY 1994-95 is questionable. There was a software change in the FHWA's SAFETYNET program in FY 1993-94 which, according to PennDOT staff, appears to have caused some problems with the counting of CVSA decals.

Source: Developed from information provided by PennDOT.

In a letter dated October 10, 1995, to CVSA member agencies, the executive director of the CVSA expressed concern about states that do not issue CVSA decals, noting that “there continues to be expressions on the part of the U.S. Congress and the industry regarding vehicles which pass the North American Standard Level 1 inspection and not receiving the appropriate CVSA decal.” Similarly an official of the Pennsylvania Motor Truckers Association (PMTA) noted that, although Pennsylvania’s MCSAP Program is well run overall and has a good reputation nationally, few CVSA decals are being given even though a truck passes the inspection. According to this official, Pennsylvania has agreed to participate in the CVSA program and therefore trucks that pass a Level 1 inspection should receive a decal.

Pennsylvania issues relatively few CVSA stickers because many MCSAP inspectors appear to have little confidence in the effectiveness of the program and because they have not been given guidance on when to issue stickers. For example, one PennDOT official explained that many PennDOT inspectors believe a truck should not just pass the Level 1 inspections, but should be in strict compliance with all safety requirements before issuing a CVSA sticker. It was also pointed out that just because a truck is mechanically safe one day does not mean it will be mechanically safe the next day. For that reason, enforcement staff continue to inspect trucks with CVSA stickers and issue a limited number of stickers. PA State Police officials explained that just because a truck has a CVSA decal does not mean it does not have safety problems. The PSP pointed out that a CVSA decal can be good up to 90 days and some truckers interpret that as giving them a “free ride” and therefore defer needed maintenance. Additionally, the CVSA decal covers only the truck; it does not address possible problems with drivers.

We also found that the MOUs between PennDOT, the PUC, and the PSP regarding the MCSAP program do not address the role of the CVSA program and that PennDOT has not issued any written guidance on the program.

IFTA and IRP Truck Registration Programs

The PA Department of Revenue participates in the International Fuel Tax Agreement (IFTA) and PennDOT participates in the International Registration Plan (IRP). The IFTA agreement operates in conjunction with the motor carriers road tax; IRP is the apportioned registration program.¹

International Fuel Tax Agreement (IFTA) Program

Prior to January 1, 1996, Pennsylvania administered the Motor Carriers Road Identification Markers program to ensure trucks complied with the Motor Carriers Road Tax Act. Each vehicle was issued an identification marker that had

¹The PUC reports that it typically does not monitor compliance with these programs as part of its roadside enforcement efforts.

to be displayed on the driver's side door panel as proof of registration to pay Pennsylvania road taxes. Trucks often had several such markers displayed indicating they had registered to pay taxes in different jurisdictions. Each state was responsible for administering its own collection program.

Under IFTA, which became effective in Pennsylvania on January 1, 1996, all motor carriers based in Pennsylvania and operating in more than one IFTA jurisdiction are to register, report, and pay to the Pennsylvania Department of Revenue all road taxes due to all states.² The Department then distributes these monies to the appropriate states. Under the agreement, participating motor vehicles (trucks weighing more than 26,000 pounds) are required to display the identification marker on the top exterior portion of both sides of the cab. A copy of the IFTA license, known as the cab card, must be carried in the cab.

The Department of Revenue reported in late April 1996 that the IFTA program was being implemented with no unusual problems. Revenue officials reported that the program is easier to administer than the prior Motor Carriers Road Identification Marker Program because it requires dealing with fewer carriers and trucks. Under the old identification marker program, 85,000 motor carriers registered with the Department, whether or not they were based in Pennsylvania, and even if they only traveled Pennsylvania roads minimally. Under IFTA, only the 30,000 Pennsylvania-based motor carriers must register. The Commonwealth receives revenues for out-of-state vehicles from those other states where the trucks are registered, prorated to Pennsylvania mileage.³

Enforcement of the IFTA program did not begin until March 1996 because of the annual two-month grace period provided for in IFTA. Because the program is new, the Department could not provide information on program compliance. The IFTA program is to include an audit component: 3 percent of accounts every year for five years or 15 percent of all accounts for the first five years. These audits are intended to verify motor carrier logs and trip plan information against miles reported and taxes paid to the various states. The Revenue Department was developing audit procedures and guidelines for this effort as of late April 1996.

As part of our observations at truck weight and enforcement sites, we gathered information by truck license plate on whether or not trucks included an IFTA sticker. We expected to provide this information to the Department of Revenue to ascertain whether or not trucks without a sticker were in violation of

²States are required by ISTEA to participate in IFTA after September 30, 1996. Maine, New Hampshire, and Vermont are exempted because they are members of the Regional Fuel Tax Agreement.

³The Revenue Department reported that through late April 1996, 104,041 IFTA decals have been issued, along with 94,202 "non-IFTA" decals for Pennsylvania trucks that do not travel out of state. In addition, there have been 4,871 trip permits and 296 temporary permits issued.

Pennsylvania's Motor Carrier Road Tax Law.⁴ The Department of Revenue informed us, however, that they were unable to provide us with information on whether or not these trucks had registered or were paying the Motor Carrier Road Tax due the Commonwealth. This is because trucks register for the IFTA program both in Pennsylvania and in other states through motor carrier companies, not by a specific vehicle; that is, a company registers its fleet of trucks and the stickers are provided to the company and are not identified to the Department by specific license plate number. Therefore, without the company's name, the Department of Revenue was unable to verify compliance with IFTA. A PennDOT official pointed out that the IFTA cab card also does not identify the states that are prorated for motor carriers road tax. He said that this posed a problem for MCSAP inspectors, including the State Police, in identifying non-compliance with IFTA.⁵ Additionally, there was ambiguity over whether or not IFTA cab card serial numbers and sticker serial numbers are required to be the same. A Revenue official advised us that they need not be congruent, and State Police and PennDOT personnel did not consider a truck to be noncompliant if the sticker and cab card number did not match.

International Registration Plan (IRP)

Pennsylvania also participates in the International Registration Plan. This allows trucks to be registered in all states participating in the plan by paying a registration fee which is then to be apportioned to the states based on the mileage traveled in each state and on each state's fee schedule.⁶ Trucks so registered have a license plate marked "apportioned" and a special registration cab card listing all of the states to which the apportioned registration applies.

As part of our field work at truck safety inspection sites, we gathered information on 99 trucks with apportioned plates registered in other states to determine whether Pennsylvania had received apportioned registration fees for that truck. To make this determination, PennDOT called the states that had registered the truck to verify that they were apportioned for Pennsylvania. Tennessee did not respond to PennDOT's calls regarding seven trucks, and the ten trucks from New Jersey were under a 120 day grace period which started April 1, 1996. Of the 82 remaining trucks, representing states such as Florida, Illinois, New York, and Oklahoma, Pennsylvania was not apportioned in eight cases, or 9.8 percent. Because of the lag time involved in reporting the information, we were not able to tell, however, whether any or all of these trucks had applied for a special permit.

⁴The IFTA program provides for a special permitting of up to 30 days without a sticker, and trucks without a sticker could still be in compliance if they have such a permit. There are also trip permits (5 days) which can be used in lieu of a sticker.

⁵By contrast, the apportioned registration (IRP) cab card identifies the specific states a truck is apportioned to in its registration.

⁶Similar to the IFTA program, IFP has an audit requirement of at least 15 percent of its carriers every five years.

To develop further information, we collaborated with PennDOT and the State Police to establish a four-hour “credentials check” on I-81 for trucks entering Pennsylvania. Of 341 trucks checked, four (1 percent) were not in compliance with registration requirements.⁷

Recommendations

- 1. PennDOT should report the total number of MCSAP inspections undertaken by the Department, the Pennsylvania State Police, and the Pennsylvania Public Utility Commission as one of its performance measures in the Governor’s Executive Budget.**
- 2. PennDOT, in conjunction with the Pennsylvania State Police and the PUC, should develop a written policy to be used by all MCSAP inspectors to determine when to issue a CVSA sticker and under what circumstances vehicles with valid CVSA stickers should be re-inspected. If this policy differs substantially from the guidelines of the CVSA program, PennDOT should withdraw from its agreement to participate in the CVSA program.**
- 3. The Department of Revenue should report to the House and Senate Transportation Committees on the status of the first-year implementation of the IFTA program, including stickers issued, revenues generated, and first-round audit results.**

⁷Three had no registration and one did not have Pennsylvania on its cab card or a trip permit.

FINDING B6

Uninsured Vehicles Remain a Problem, Particularly in the Philadelphia Area

Summary: In a 1994 performance audit report on auto insurance in southeastern Pennsylvania, we estimated that up to one-third of the motor vehicles registered in Philadelphia were uninsured. Recent estimates show that the number of registered, uninsured vehicles in Philadelphia may have declined in recent years. These figures do not, however, include unregistered vehicles that may be operating without insurance or vehicles that are fraudulently registered at an address outside the city.

In November 1995 PennDOT stopped auditing vehicle registration renewals for compliance with the Financial Responsibility Law. The Department is now focusing on potentially fraudulent vehicle titles, particularly those submitted by messenger services and tag agents, and on working with the Office of Attorney General and the Philadelphia District Attorney to identify insurance fraud. We found that PennDOT has made progress in implementing a new computer system to identify uninsured vehicles but that this system is not as effective as it could be because insurance companies are not required to provide information on new policies. Other proposals to improve compliance with the Financial Responsibility Law include amending current statutes to allow private agents to collect the tags on uninsured vehicles, increasing fines, and granting state and local police the authority to impound uninsured vehicles.

All motor vehicle owners must maintain vehicle liability insurance (financial responsibility) on vehicles required to be registered in Pennsylvania (75 Pa. C.S.A. §1786). Vehicle liability insurance covers property damage, medical expenses, and other costs that may result from an accident. A vehicle's registration can be suspended for three months if insurance lapses, unless the lapse was for less than 31 days and the owner can demonstrate that the vehicle was not operated during this period. If the Department determines the owner operated or permitted the vehicle to be operated without insurance, his driver's license can be suspended for three months.

We estimated the percentage of uninsured, registered vehicles for Philadelphia, the four surrounding suburban counties, and for the state as a whole from 1989 to 1994. These estimates, which are presented in Table 28, show that while the percentage of uninsured vehicles in Philadelphia has generally decreased since

Table 28

**Comparison of the Number of Vehicles* Registered
and the Number of Vehicles Uninsured
(1989-1994)**

| | <u>Philadelphia</u> | <u>Philadelphia Suburbs^a</u> | <u>Other Counties</u> | <u>Statewide</u> |
|------------------------------------|---------------------|---|---------------------------|------------------|
| 1989 | | | | |
| Registration..... | 515,640 | 1,435,490 | 5,216,529 | 7,167,659 |
| Written Exposures ^b ... | <u>338,699</u> | <u>1,309,093</u> | <u>4,857,010</u> | <u>6,504,802</u> |
| Uninsured | 176,941 | 126,397 | 359,519 | 662,857 |
| Percent Uninsured.... | 34.3% | 8.8% | 6.9% | 9.2% |
| 1990 | | | | |
| Registration..... | 499,481 | 1,439,207 | 5,288,927 | 7,227,615 |
| Written Exposures ^b ... | <u>323,999</u> | <u>1,309,338</u> | <u>4,925,597</u> | <u>6,558,934</u> |
| Uninsured | 175,482 | 129,869 | 363,330 | 668,681 |
| Percent Uninsured.... | 35.1% | 9.0% | 6.9% | 9.3% |
| 1991 | | | | |
| Registration..... | 492,231 | 1,440,727 | 5,359,002 | 7,291,960 |
| Written Exposures ^b ... | <u>344,579</u> | <u>1,360,850</u> | <u>5,170,063</u> | <u>6,875,492</u> |
| Uninsured | 147,652 | 79,877 | 188,939 | 416,468 |
| Percent Uninsured.... | 30.0% | 5.5% | 3.5% | 5.7% |
| 1992 | | | | |
| Registration..... | 497,606 | 1,461,339 | 5,465,948 | 7,424,893 |
| Written Exposures ^b ... | <u>367,107</u> | <u>1,377,297</u> | <u>5,149,422</u> | <u>6,893,826</u> |
| Uninsured | 130,499 | 84,042 | 316,526 | 531,067 |
| Percent Uninsured.... | 26.2% | 5.8% | 5.8% | 7.2% |
| 1993 | | | | |
| Registration..... | 498,545 | 1,479,736 | 5,538,187 | 7,516,468 |
| Written Exposures ^b ... | <u>372,571</u> | <u>1,409,006</u> | <u>5,253,386</u> | <u>7,034,963</u> |
| Uninsured | 125,974 | 70,730 | 284,801 | 481,505 |
| Percent Uninsured.... | 25.3% | 4.8% | 5.1% | 6.4% |
| 1994 | | | | |
| Registration..... | 500,575 | 1,520,334 | 5,651,209 | 7,672,118 |
| Written Exposures ^b ... | <u>372,416</u> | <u>1,434,364</u> | <u>5,385,529</u> | <u>7,192,309</u> |
| Uninsured | 128,159 | 85,970 | 265,680 | 479,809 |
| Percent Uninsured.... | 25.6% | 5.7% | 4.7% | 6.3% |

*Private passenger vehicles and trucks up to 5,000 pounds.

^aBucks, Chester, Delaware, and Montgomery counties.

^bWritten car years (one written car year equals an annual policy purchased for one automobile during that calendar year).

Source: Developed using Insurance Department methodology and data from the PennDOT Bureau of Motor Vehicles and the *Greenbook*, published by the National Association of Independent Insurers.

1990, 26 percent of all registered vehicles remained uninsured in 1994. The table also shows that outside Philadelphia uninsured vehicles are much less of a problem.

PennDOT's Efforts to Identify Uninsured Vehicles

PennDOT attempts to identify uninsured vehicles by requiring vehicle owners to provide insurance information when registering or renewing their vehicle registrations, by attempting to verify that persons who cancel their insurance policies obtain new policies from another company, by reviewing vehicle titles received from suspect messenger services and tag agencies, and by providing information to the Pennsylvania Office of Attorney General and the Philadelphia District Attorney's Office.¹

Reviewing Vehicle Registration and Title Information

The Motor Vehicle Financial Responsibility Law requires PennDOT to verify proof of insurance when applicants register or renew their vehicle's registration.² PennDOT reviews initial and renewal registration forms to ensure that the information provided by vehicle owners is complete. If an application is missing the required information, PennDOT sends a letter to the vehicle owner requesting that the information be provided and informing the owner that the vehicle cannot be registered without such documentation. If the owner fails to respond within 45 days, the vehicle's registration will be suspended.

Until November 1995, PennDOT also sought to audit a 50 percent sample of vehicle registrations from Philadelphia and 25 percent of registrations from other counties in the Commonwealth as a way to verify compliance with the insurance requirement. (See Table 29.) The audit consisted of PennDOT sending a letter to the insurance company identified on the vehicle registration card asking the company to verify that the vehicle was insured at the time of registration. If the insurance company found that the vehicle was not insured, PennDOT sent a letter to the vehicle owner, who had 45 days to provide proof of insurance. If the owner did not submit such proof, PennDOT suspended the vehicle's registration until the owner could prove financial responsibility.

¹In addition to the methods discussed here, motorists who take their vehicles to garages for their yearly safety inspection must provide proof of automobile insurance to the inspection mechanic. Inspection mechanics are required by statute to deny a certificate of inspection if the motorist fails to present proof of financial responsibility. The inspection mechanic may provide notification of non-insurance to the Department but is not required to do so. PennDOT officials reported receiving information on only one such denial in recent years. PennDOT also monitors the incidence of uninsured vehicles through accident information.

²If an applicant submits false, fraudulent or incomplete information, PennDOT can refuse to register the vehicle or can suspend its registration.

Table 29

Insurance Audits Conducted

| | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>1995</u> | <u>Average Per Year</u> |
|---|-------------|-------------|-------------|-------------|----------------------|-----------------------------|
| <u>Passenger Vehicles and Light Trucks Registered</u> | | | | | | |
| Statewide | 7,291,960 | 7,424,893 | 7,516,468 | 7,672,118 | 7,654,302 | 7,511,948 |
| Philadelphia County . | 492,231 | 497,606 | 498,545 | 500,575 | 488,348 | 495,461 |
| 66 Other Counties | 6,799,729 | 6,927,287 | 7,017,923 | 7,171,543 | 7,165,954 | 7,016,487 |
| <u>Number Audited</u> | | | | | | |
| Statewide | 1,377,937 | 1,663,099 | 1,893,365 | 1,538,723 | 444,507 ^a | 1,401,306 ^b |
| Philadelphia County . | 213,762 | 224,841 | 362,412 | 221,321 | 51,375 ^a | 216,797 ^b |
| 66 Other Counties | 1,164,175 | 1,438,258 | 1,530,953 | 1,317,402 | 393,132 ^a | 1,184,509 ^b |
| <u>Percent Audited</u> | | | | | | |
| Philadelphia County .. | 43.4% | 45.2% | 72.7% | 44.2% | 10.5% | 43.8% |
| 66 Other Counties | 17.1 | 20.8 | 21.8 | 18.4 | 5.5 | 16.9 |

^aThe renewal audit process was discontinued in late October 1995. Audits are now done on title work, based on selection by PennDOT staff.

^b1995 data is annualized.

Source: Developed from information obtained from PennDOT's *Management Objectives Report* (Blue Book) and *Report of Registrations* for calendar years 1990 through 1995.

In November 1995 PennDOT ceased conducting such audits believing them to be an inefficient and uneconomical way of identifying uninsured vehicles. In 1994 PennDOT conducted over 1.5 million insurance audits statewide and spent approximately \$45,000 to mail 137,280 notices to customers and requests to insurance companies to verify proof of vehicle insurance, in addition to PennDOT labor costs. In addition to concerns over costs, PennDOT believes that the audits can be viewed as harassment since in many cases the vehicle owner did not drop his insurance but simply changed insurance companies.

Instead of auditing vehicle registration applications, PennDOT now reviews a sample (approximately 200 per month) of vehicle title documents for fraudulent information. The Department believes this is a more efficient way to identify uninsured vehicles and insurance fraud. These reviews target documents submitted by messenger services and tag agents, as they are allegedly more frequently involved in fraudulent insurance documents. The Department also receives tips of insurance

fraud through correspondence, telephone calls, and the insurance verification process related to insurer cancellation reports.

Insurer Cancellation Reports

The Department also identifies uninsured vehicles from reports submitted by insurers. 75 Pa. C.S.A. §1786(e) entitled “Obligations upon termination of financial responsibility” states: “an insurer who has issued a contract of motor vehicle liability insurance . . . shall notify the department in a timely manner and in a method prescribed by the department’s regulations.” PennDOT has not promulgated any regulations to further define this provision.

The subsection referenced above also requires insurers to notify the Department within ten days of the termination of an insurance policy if they have reason to believe the policy is only to provide proof of financial responsibility. Current regulations only require insurers to notify PennDOT of such terminations if the policy was in effect for six months or less.

When the Department receives such notification and determines that the vehicle has a valid registration, a letter is sent to the owner of the vehicle requesting proof of financial responsibility. The letter includes information as to what would constitute acceptable proof of insurance and a date by which the information must be supplied (generally 45 days). If there is no response to the Department’s request or if the vehicle owner’s insurance has lapsed, the vehicle’s registration is suspended.

In 1994 PennDOT suspended 143,111 vehicle registrations, representing approximately one vehicle registration suspension for every three vehicles estimated to be uninsured. (See Table 30.) During this same time period, 17,176 drivers’

Table 30

Number of Vehicle Registrations and Drivers’ Licenses Suspended for Lack of Insurance

| | <u>1989</u> | <u>1990</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>1995</u> |
|-------------------------|-------------|-------------|-------------|----------------------|----------------------|----------------------|----------------------|
| # Vehicle Registrations | | | | | | | |
| Suspended..... | 156,864 | 134,239 | 157,513 | 148,729 ^a | 138,491 ^b | 143,111 ^c | 190,514 ^d |
| # Drivers’ Licenses | | | | | | | |
| Suspended..... | 4,799 | 2,690 | 8,268 | 6,493 | 8,028 | 17,176 | 18,329 |

^a21,243 identified through insurance audits.

^b34,600 identified through insurance audits.

^c26,539 identified through insurance audits.

^d36,856 identified through insurance audits.

Source: Developed from information obtained from PennDOT’s Bureau of Motor Vehicles.

licenses were suspended for failure to maintain financial responsibility. In 1995 PennDOT suspended 190,514 vehicle registrations and 18,329 drivers' licenses for lack of insurance. The Department attributes the increase in vehicle registration suspensions from 1994 to 1995 primarily to the implementation of a new financial responsibility monitoring system in May 1995. Under the new system, letters requesting proof of insurance are generated when (1) the insurance company name or other insurance-related information is not complete, (2) multiple cancellation notices are received for the same motorist, and (3) the vehicle identification number does not match the vehicle's reported model and make.

PennDOT reports that although insurance companies generally comply with the requirement to provide information on cancelled policies, the information provided is not always timely, consistent, or complete. For example, some insurance companies do not always provide the effective date of the policy termination or the reason for the policy cancellation. Although state law requires insurance companies to notify the Department within ten days when a motorist cancels or terminates his policy in certain situations, PennDOT officials reported that sometimes the information reported is three to four months old.

Authority to sanction insurers who fail to report cancelled policies in a timely manner is unclear under present law. Insurance Department officials told us that they believe they have authority to sanction insurers if PennDOT would refer a case, but PennDOT has not done so. A PennDOT official told us that because compliance with the reporting requirement is generally good they have not referred any cases to the Insurance Department.

PennDOT's Efforts With the Office of Attorney General and Philadelphia District Attorney's Office

The Insurance Fraud Prevention Authority, created by Act 1994-166, provided an estimated \$1.9 million in FY 1995-96 to fund the insurance fraud operations of the Philadelphia District Attorney's Office³ and \$1.753 million to fund the Insurance Fraud Section of the Office of Attorney General.

As part of this effort, in the fall of 1995 PennDOT referred 25 and 50 cases involving potential motor vehicle insurance fraud to the Office of Attorney General and the Philadelphia District Attorney's Office, respectively. The 25 cases referred to the Attorney General's Office involved people who allegedly placed false insurance policy numbers on vehicle registration and renewal applications. The 50 cases

³The Philadelphia District Attorney's Office has also received an additional \$200,000 for an advertising campaign to encourage Philadelphia residents to report rate evaders (persons who live in one place but register their car in another to obtain better insurance rates). The Office will investigate the claims reported.

referred to the Philadelphia District Attorney's Office focused on tag agencies and people who allegedly obtained false insurance cards or falsely claimed that they had insurance on their vehicle registration application. As of March 14, 1996, 18 people had been arrested for submitting fraudulent applications for registration and one tag shop owner had been arrested for selling fake insurance cards and engaging in other fraudulent activities.

As of April 1996, no other cases had been referred to the Philadelphia District Attorney's Office or the Attorney General's Office. However, PennDOT and the Philadelphia District Attorney's Office met in early April 1996 to discuss a process for submitting future such cases to the Philadelphia District Attorney's Office. According to the Deputy Secretary for Safety Administration, PennDOT would eventually like to see the Office of Attorney General investigate insurance fraud cases involving all counties except Philadelphia and the Philadelphia District Attorney's Office investigate Philadelphia cases. PennDOT's goal is to identify and refer at least 1,000 insurance fraud cases per month to the Attorney General's Office and the Philadelphia District Attorney's Office.

Legislation Needed to Aid PennDOT in Identifying Uninsured Vehicles

Additional legislative authority is needed to help ensure that motor vehicles are not operated without insurance and that, once identified, appropriate enforcement actions and sanctions can be applied.

PennDOT Needs Authority to Require Insurance Companies to Provide New Policy Information

PennDOT spent an estimated \$1.2 million on a new financial responsibility system that was implemented in May 1995. However, this system is not being used to its fullest. In particular, the new system has the ability to automatically check cancellations reported by one insurance company against the new policies written by another company. This would greatly improve PennDOT's ability to identify persons who intentionally cancel policies to avoid responsibility as opposed to those who are simply changing insurance companies. However, the system is not effective because most insurance companies refuse to submit information on the new policies they write.

PennDOT and representatives of the insurance industry have met on this and related issues on three occasions recently. Topics discussed included:

- The need to have access to new policy information.
- The need for insurance companies to uniformly agree on when a policy is considered cancelled (e.g., after 30, 60, or 90 days grace period).
- The need for insurance companies to provide recent information on cancellation tapes. Information on tape is typically three to four months old.

- Suspension notices sent to customers need to be rewritten in a more customer friendly tone.

However, as of May 1996, specific agreement on how to resolve these issues had not been reached. The Department's legal office is reviewing whether the Department has the authority under 75 Pa. C.S.A. §1786 (e)(2) (concerning policies that have been terminated or canceled) to promulgate regulations requiring each insurer to provide the Department with a list of its new or current auto insurance policies. In the absence of such authority, insurers would not have to submit information on new policies written unless the General Assembly passed legislation requiring that such information be provided.⁴ To recognize insurance industry concerns, the legislation could require that the information be held confidential.

Surrender/Seizure of Registration Plates and Cards

In 1995 the Florida legislature mandated that the Department of Highway Safety and Motor Vehicles launch a one-year "tag recovery" pilot program in three counties. A licensed recovery agent, or "repo man," looks for uninsured vehicles based on information provided him by the Department every month. The agent can remove an uninsured car's license plate after contacting the Department to ensure that the car remains uninsured. The agent then turns the plate over to the local police. To drive legally again, the motorist must buy auto insurance and pay \$166.60 to get the license tag reinstated. The agent receives \$50 for every license plate he repossesses.

A 1995 newspaper article reported that some licensed recovery agents were reluctant to join the program because there was no "hold harmless" provision to protect them if something happened while recovering a tag. Nevertheless, as of March 1996, 18 recovery agencies had reportedly joined Florida's tag recovery program, which is now a permanent program. Since the initiation of the program in October 1995, recovery agents have repossessed 200 tags. Florida officials report a 2 percent decrease in the number of uninsured drivers since the start up of the program which they attribute to the publicity of the tag recovery program.

Pennsylvania's current statute does not specifically authorize the Department to contract with private parties to seize the registration plates of persons whose registration has been suspended. The Department can, however, delegate such authority to designated employees, the Pennsylvania State Police, local police officers, sheriffs/deputy sheriffs, or constables/deputy constables. Typically, the Department delegates authority to the local police. Because the statute specifies the types of public officers who can be authorized to seize registration plates and cards, it would probably need to be amended to allow private parties to perform this function.

⁴House Bill 2049 would require insurers to notify PennDOT within 10 days of issuing or cancelling an automobile insurance policy. As of early May 1996 this bill was in the House Insurance Committee.

Need to Strengthen Penalties and Enforcement

Operating a vehicle without financial responsibility is currently a summary offense under the Vehicle Code. Offenses are not punishable by imprisonment; they are punishable by a \$300 fine and/or a suspension of the vehicle's registration or the driver's license. Proceedings for violations are initiated by citation rather than arrest, and uninsured vehicles cannot be impounded.

The district attorney of Philadelphia recently noted she has limited tools to fight the uninsured motorist problem. According to a *Philadelphia Inquirer* article, she is currently pursuing 18 felony cases involving insurance fraud in part because prosecutors and police have greater authority in such cases than in summary offenses under the Vehicle Code. For example, the police can arrest people on felony charges.

The district attorney of Philadelphia also noted that police cannot currently impound uninsured vehicles. (The Vehicle Code permits cars to be impounded under certain circumstances but not for lack of insurance.) House Bills 28 and 2360 would permit uninsured vehicles to be impounded if the owner is convicted of failing to maintain financial responsibility and does not pay all applicable fines within 24 hours.

Recommendation

- 1. The General Assembly should consider:**
 - a. Amending the Motor Vehicle Financial Responsibility Law to require insurers to report to the Department of Transportation on a timely basis information on new policies written so that such information can be matched with cancellation information received by the Department. Such an amendment should also give PennDOT the authority and means to enforce this requirement.**
 - b. Authorizing PennDOT to contract with private parties⁵ to recover registration tags on vehicles whose registration has been suspended for not having insurance.**
 - c. Providing the State Police and local authorities with statutory authority to impound vehicles whose registration has been suspended for lack of insurance.**
 - d. Increasing the fine for noncompliance to the Motor Vehicle Financial Responsibility Law to a point where it provides a meaningful economic deterrent to driving without insurance.**

⁵The Pennsylvania Department of Banking licenses collector-repossessors under the Motor Vehicle Sales Finance Act, 69 P.S. §601 *et seq.* These are independent contractors who collect payments or repossess motor vehicles that are the subject of an installment contract. Other persons may repossess a vehicle without such a license, however (e.g., employees of an automobile dealer or sales finance company).

FINDING B7

PennDOT Has Submitted Its Revised Plan to Comply With Federal Clean Air Standards

Summary: PennDOT has only recently developed a State Implementation Plan which the General Assembly has accepted. This plan was submitted to the EPA in March 1996, and federal conditional interim approval is expected by late summer 1996. According to the plan's calculations, Pennsylvania should meet EPA revised standards using a decentralized emissions inspection plan. Under the prior centralized plan, Pennsylvania had hired a contractor, Envirotest, to implement a biennial test-only plan. The Commonwealth reached a settlement with Envirotest to reimburse approximately \$145 million plus interest to the contractor to end the agreement.

In 1994, pursuant to Senate Resolution 116, the Legislative Budget and Finance Committee conducted a study of the Commonwealth's planned enhanced vehicle emissions inspection and maintenance (I/M) program. Significant changes have occurred since that review at both the state and federal levels regarding the requirements and implementation of the program.

Requirements of the 1990 Amendments to the Clean Air Act

The 1990 amendments to the federal Clean Air Act imposed strict requirements on states to clean the air particularly in polluted urban areas. The Clean Air Act requires that several steps be taken to reduce emissions in counties with serious or worse ozone problems, including implementing an enhanced Vehicle Emissions Inspection and Maintenance (I/M) Program. The only area in Pennsylvania classified under the 1990 Clean Air Act amendments as having a serious or worse ozone problem is the five-county Philadelphia area (Bucks, Chester, Delaware, Montgomery, and Philadelphia counties). However, the 1990 amendments to the Clean Air Act also placed Pennsylvania in the Northeast Ozone Transport Region.

An Ozone Transport Region is a group of states or parts of states that adjoin each other and that comprise a geographical area where air currents carry pollution from one part of the region to another, thus affecting the air quality of neighboring areas. States in the Northeast Ozone Transport Region must implement Enhanced I/M Programs regardless of the quality of the air in those counties if the area meets a population threshold of 100,000 or more. As a result, Pennsylvania must implement an Enhanced I/M Program in 25 counties, not just the five-county

Philadelphia area. These other counties include Allegheny, Beaver, Berks, Blair, Cambria, Centre, Cumberland, Dauphin, Erie, Lackawanna, Lancaster, Lebanon, Lehigh, Lycoming, Luzerne, Mercer, Northampton, Washington, Westmoreland, and York.

The Environmental Protection Agency (EPA) published regulations in 1992 as guidance for complying with the Clean Air Act amendments. The 1992 rule announced a preference for a centralized test-only network for Enhanced I/M Programs. It also contained a provision for case by case equivalency in which emission reduction credits for test and repair networks are assumed to be 50 percent less than for a test-only network for the tailpipe emission test, purge test, evaporative system integrity test, catalyst check, and gas cap check, and 75 percent less for the evaporative canister check, positive crank case ventilation check, and air systems check. This meant that if a state chose to implement a Test and Repair I/M Program the EPA would automatically penalize the program design and that the loss of emission reduction credits would have to be made up elsewhere in the program such as by testing more model years or more frequent testing.

Pennsylvania's Implementation of an Enhanced Emissions Inspection Program

Pennsylvania's previous Enhanced I/M Program Plan had followed in most respects the EPA's model plan. It provided for biennial testing at a cost of \$17-\$22 for model year 1968 and later gasoline powered vehicles with a gross vehicle weight rate of 9,000 lbs. or less. Model year 1977 and later vehicles were to be tested using EPA developed I/M 240 equipment and test procedures. Approximately 6 million vehicles would have been subject to testing at 86 centralized test-only emission inspection stations.

In November 1993 the Pennsylvania Department of Transportation entered into a seven-year contract with Envirotest Systems of Tucson, Arizona, to implement the state's Enhanced I/M Program. In late 1994, however, the Vehicle Code was amended to halt the implementation of the centralized test-only system and require the Department to consider either a totally decentralized or hybrid testing network. A hybrid testing network consists of elements of both test-only and decentralized test and repair stations.

Subsequent to that amendment, the EPA announced its intention to amend its 1992 Rule to establish separate "high" and "low" enhanced I/M performance standards for areas required to implement Enhanced I/M Programs and in September 1995 published its *Inspection Maintenance Flexibility*

*Amendments.*¹ In November 1995, the National Highway System Designation Act of 1995 (NHS Act) was enacted which specifically addressed the 50 percent penalty for failure to use a centralized system. The act permits, within 120 days of its enactment, a state to submit a State Implementation Plan Revision proposing an interim inspection and maintenance program. Pennsylvania submitted its revision to the EPA on March 26, 1996, and PennDOT published proposed rule making for the Enhanced Emissions Inspection Program in the *Pennsylvania Bulletin* on March 16, 1996. As of May 1996, PennDOT was meeting with the PA Department of Environmental Protection to respond to questions raised by the EPA in reviewing Pennsylvania's draft SIP.² Federal conditional interim approval is expected by late summer 1996.

Under the new program all tests and repairs will be conducted on an annual basis in conjunction with the existing annual safety inspections. A monetary cap for repairs will be phased in beginning at \$150 for the first two years of the program. The Decentralized Test and Repair Program will be phased in with Beaver, Allegheny, Washington, Westmoreland, Bucks, Montgomery, Philadelphia, Delaware, and Chester counties required to implement the program in 1997 and the remaining 16 counties required to implement the program in 1999. The five-county Philadelphia area will be required to meet the high enhanced performance standard while the remaining 20 counties will be required to meet the low enhanced performance standard. There will be no cap on the test fee that test and repair stations can charge for the enhanced emissions test.³

Envirotest Settlement Information

PennDOT agreed to buy out the enhanced emissions inspection contract with Envirotest Systems, Inc., for approximately \$145 million, plus interest. Under the settlement agreement, Envirotest owns all the property they purchased and the buildings they constructed in preparation for program implementation. In addition, the agreement requires the company to "utilize best efforts" to sell that property prior to April 20, 1998. The Commonwealth receives 75 percent of the proceeds which exceed \$55 million. The Commonwealth must pay an additional amount not to exceed \$15 million, if the proceeds are less than \$55 million. The General Assembly approved the buyout in December 1995.

¹The "high" standard is the same as the performance standard originally established by the 1992 Rule. The "low" standard is a less stringent enhanced I/M performance standard which can be used in areas that can comply with the other Clean Air Act pollution reduction requirements and achieve attainment with a program that has less emission reduction requirements than the high performance standard.

²A draft SIP was submitted to the EPA in January 1996. Just prior to submission of the revised SIP in March, the EPA contacted PennDOT with questions on the draft provisions. Although a number of these issues were addressed in the March submission, several remain.

³The Department plans to seek amendments to the Vehicle Code to allow a visual component of the inspection, coordinate the emissions inspection to the safety inspection, as well as to permit the Department to charge certain fees, including application fees, to facilities and technicians and a sticker fee to motorists. These fees would be remitted to the Department to enable the Enhanced Program to be self-supporting. As of May 1996, a bill is pending in the House of Representatives, H.B. 713, which would coordinate the emissions inspection with the safety inspection and limit costs of repairs to emission control devices. This bill is currently under consideration by the House Transportation Committee.

FINDING C1

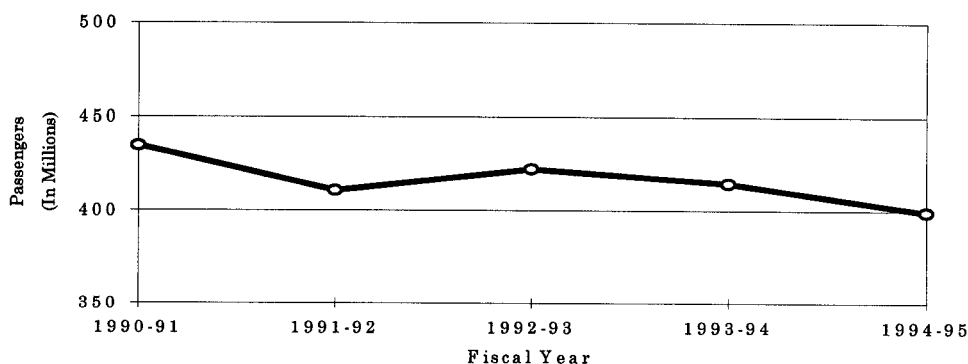
The Decline in Public Transportation Ridership Is Likely to Continue

Summary: Public transit ridership in Pennsylvania dropped from 435 million passengers in FY 1990-91 to 399 million passengers in FY 1994-95, an 8 percent decline. Combined federal and state grants to mass transit in Pennsylvania grew from \$510 million to \$725 million during this same time period, an increase of 42 percent. Federal funding cuts, however, are now occurring. Public transit operators in Pennsylvania are attempting to adjust to these cuts by cutting services, raising fares, or a combination of the two. This may lead to further ridership declines.

Combined federal and state financial support for public transit systems in Pennsylvania has increased, but the number of patrons using the systems has declined. From FY 1990-91 to FY 1994-95, public transit ridership in Pennsylvania had dropped by more than 8 percent, from 435 million passengers to 399 million passengers. (See Exhibit 27.)

Exhibit 27

Public Transit Ridership in Pennsylvania



Source: Developed from information obtained from PennDOT's Bureau of Public Transportation.

This decline in ridership is not unique to Pennsylvania. In 1990 public transit passenger trips were 8.8 billion nationally. The preliminary figures for 1993 (8.4 billion trips) equate to about a 5 percent decline in the nation's passenger trip count over these four years.

Public transit ridership in the United States has gone through several major growth cycles. From 1900 to 1929, transit grew steadily. The Great Depression caused a steep decline in ridership between 1929 and 1939. World War II caused motor fuel rationing and an economic boom that led to a rapid growth in transit with ridership reaching an all-time high in the mid-to-late forties (well over 20 billion). Ridership then declined as the population moved to the suburbs, fuel prices dropped, and automobiles became affordable to increasing numbers of citizens. In 1973, slow growth began again as local, state, and federal government partnerships provided funding to improve America's transportation infrastructure. Ridership is now again on the decline.

PennDOT officials have suggested a variety of possible reasons for this decline in ridership, many of which are beyond the control of the system operators.¹ These include:

- The movement of people and jobs from downtown areas to the suburbs.
- The growth of suburb-to-suburb commutes that are outside of the traditional suburb-to-downtown transit routes.
- Route scheduling further complicated by individuals with multiple jobs in widely dispersed locations working a variety of schedules.
- The availability of automobiles, new roads, and new parking facilities.
- A population that is accustomed to a two-driver family.
- The variability in public subsidies for transit.
- Increased fares.
- Reductions in service because of budget constraints.
- Passenger personal safety concerns.
- Often riders who have found alternative means of transportation during a transit strike will not all return to public transportation once the strike is settled (SEPTA believes that it lost about 5 percent of its riders after the last strike).

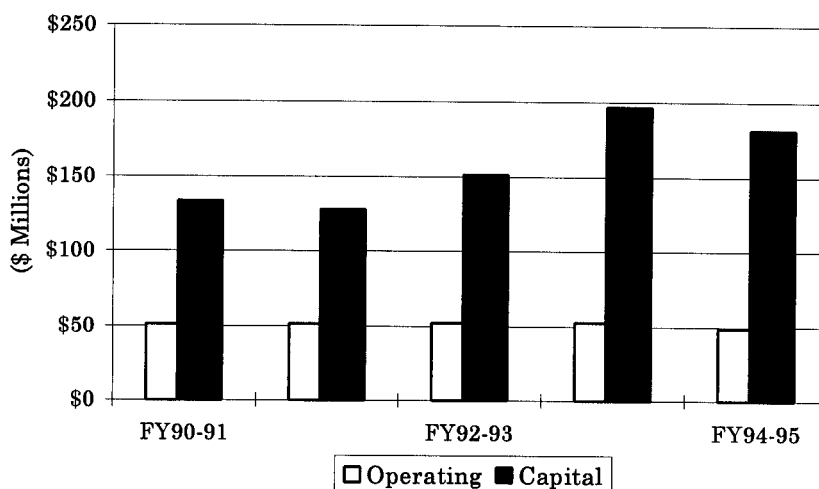
¹Five separate performance measures relating to mass transit are presented at the beginning of this Chapter of this audit: (a) public transit passengers; (b) federal and state financial assistance to public transit systems; (c) operating ratios; (d) operating grants per passenger; and (e) free transit and shared ride grants, passengers, and cost per passenger. Appendix I presents revenue and expenditure data on each of Pennsylvania's public transit systems.

Federal and State Subsidies Have Increased by 42 Percent in Four Years

Total federal and state grants to Pennsylvania's public transit systems increased 42 percent from \$510 million in FY 1990-91 to \$725 million in FY 1994-95. As shown on Exhibits 28 and 29, federal transit funding to Pennsylvania increased 25 percent during this period; state grants and subsidies increased 52 percent.

Exhibit 28

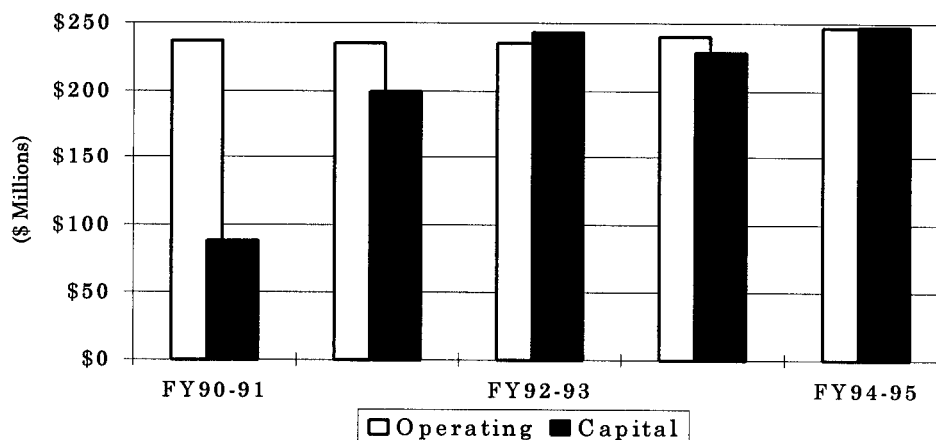
Federal Operating Subsidies and Capital Grants



Source: Developed from information obtained from PennDOT's Bureau of Public Transportation.

Exhibit 29

State Operating Subsidies and Capital Grants



Source: Developed from information obtained from PennDOT's Bureau of Public Transportation.

Although state operating subsidies to transit system operators increased by only 4 percent from FY 1990-91 to FY 1994-95, state capital grants increased by 180 percent. This increase was primarily due to the infusion of monies from the Public Transportation Assistance Fund (PTAF) created by Act 1991-26. Its revenue is derived from a \$1 per tire fee on the sale of tires, a portion of the public utility realty tax, a tax on motor vehicle leases and rentals, a portion of the Pennsylvania sales and use tax, and interest. A direct result of this fund has been a 176 percent increase in capital grants to urban transit systems and a 944 percent increase in capital grants to rural systems between FY 1990-91 and FY 1994-95. The net effect has been a 52 percent increase in total state government funding for public transit.

According to the American Association of State Highway and Transportation Officials, in FY 1992-93 Pennsylvania ranked third in the nation in direct state government support to mass transit, only bettered by New York and California. Among the nine peer states we reviewed, Pennsylvania consistently ranked second (after New York) in annual state direct financial assistance for public transportation for FY 1990-91 through FY 1992-93, the most recent years available.

Overall, federal funding for public transit in Pennsylvania increased by 25 percent from FY 1990-91 to FY 1994-95. The increase, however, varied both between operating and capital grants and between urban and rural systems. For example, federal operating subsidies to urban system operators decreased 7 percent during this period, from \$48.0 million to \$44.6 million, while federal operating subsidies to rural system operators increased by 40 percent, from \$3.0 million to \$4.2 million. Federal capital project grants to Pennsylvania mass transit operators increased 36 percent--a 37 percent increase for urban systems, but a decrease to the rural and small urban system operators of about 99 percent.

Transit Operators Are Preparing for Potential Cuts in Federal Funding

Pennsylvania receives about one federal dollar for every two state dollars provided to transit systems. However, in FFY 1996 federal funding for public transit was cut 44 percent, and recent federal budget proposals call for the end of funding for public transit operations entirely by the year 2001. Future increases in federal support for public transportation, therefore, appear unlikely.

The Secretary of Transportation, in testimony before the House Appropriations Committee, proposed increasing state operating and capital funding for public transportation from the current \$612 million to \$631 million in FY 1996-97. He stated that Pennsylvania does not have the fiscal resources to replace the cutbacks in federal funding for mass transit, which could particularly impact upon the rural and small urban system operators that rely on federal funding for a greater proportion of their revenues.

Fares pay for less than 40 percent of the operating costs of transit systems. Fare increases and service cutbacks reduce ridership. A 1991 study by the American Public Transit Association (APTA) on the effects of fare changes to bus ridership found that a 10 percent increase in fares typically results in a 4 percent decrease in riders. Transit operators thus fear a downward "death spiral"--to make up lost revenues from fewer riders, fares are increased and services are cut back. This leads to still fewer riders, which triggers more fare increases and service cutbacks.

The relative impact of the federal cuts to operating subsidies will be felt quite differently by the various transit system operators in Pennsylvania. In FY 1994-95, for the smaller urban systems, federal operating subsidies as a percent of operating revenues varied from as much as 79 percent for Altoona (AMTRAN) to as little as 19 percent for State College (CATA). Federal operating subsidies for the state's largest transit systems, Southeastern Pennsylvania (SEPTA) and Allegheny County (PAT) were 7.1 and 9.8 percent of operating revenues respectively in FY 1994-95.

SEPTA and PAT are both presently investigating the options available to them in response to projected operations deficits caused by increasing expenses and decreasing government aid. The SEPTA board has contracted with a Chester County company that specializes in rescuing struggling businesses to assess their financial, operational, and managerial issues. PAT officials have stated that further "belt tightening" may not be possible, but that a fare increase and/or service cuts would be a "last resort."

Capitol Area Transit (CAT) has announced that it will cut service and increase fares to adjust its operating budget in anticipation of fewer federal operating subsidy dollars. Lancaster (RRTA) has increased fares, reduced service, and expects to lose 441,000 passengers over the next three years. York (YCTA) plans to eliminate two routes and cut service on four others and expects to lose 33,000 customers annually. Erie (EMTA) is cutting service and has initiated a marketing campaign to try to increase ridership. Lehigh/Northampton (LANTA) is making a 10 percent reduction in service and is considering a fare increase. Altoona (AMTRAN) has cut two of its nine routes. Berks (BARTA), Chambersburg (CTA), and Williamsport (WBT) have increased fares and reduced service. State College (CATA) has increased fares.

FINDING C2

The Road Turnback Program Has Stalled Due Primarily to Low Funding for Local Maintenance Costs

Summary: PennDOT is responsible for many secondary roads that in most states would be owned and maintained by local governments. Efforts to transfer these 12,000 miles of roads to local governments have stalled in part because the annual \$2,500 per linear mile grant municipalities receive when they take a road back falls far short of actual annual maintenance costs.

Yearly revenues to the turnback program are currently \$15.5 million. At this rate, annual maintenance payments alone will consume all of the funds once the mileage turned back, now at 3,760, reaches 6,213 linear miles. This will occur sooner if the \$2,500 annual maintenance grant is increased.

Pennsylvania has the fourth largest state highway system in the nation. PennDOT maintains a highway system that is larger than that maintained by the states of New York, New Jersey, and all six of the New England states combined. As such, PennDOT is responsible for many secondary roads that in most states would be owned and maintained by local governments.

The Department classifies roads which are narrow, fragmented, have a low traffic volume, and essentially serve only local purposes as functionally local roads. In 1981 PennDOT targeted about 12,000 miles of functionally local roads to be “turned back” to municipalities. No time frame was stipulated for the transfer of these roads in the legislation that subsequently created the Road Turnback Program.

PennDOT has returned about 4,100 miles of these roads to municipalities. A primary objective of the turnback program is to return minor roads that would likely receive greater maintenance attention at the local level. Additionally, by eliminating mileage from the current state roadway system, PennDOT officials believe their forces will be better able to concentrate their resources on the remaining state network.

Inadequate Funding Has Stalled the Turnback Program

Act 1981-81 authorized PennDOT to transfer certain roads to local governments, but it did not provide any dedicated funding for the return of these roads.

As a result, the only payment that initially accompanied a turnback road was an increase in the municipality's liquid fuels allocation, which is partially based on the municipality's highway mileage. Two years later, Act 1983-32 authorized three mills of the Oil Company Franchise Tax to a State Highway Transfer Restoration Restricted Account to fund the program and disallowed the use of turnback roads in the calculation of the liquid fuels tax allocation. Fund revenues have ranged from a low of \$8.9 million in FY 1983-84 to a high of \$16.4 million in FY 1992-93 to \$15.8 million in FY 1994-95 (see Table 31).

Turnback program funding consists of two components--maintenance and restoration. Municipalities that voluntarily take back roads from the state receive a perpetual maintenance grant of \$2,500 per linear mile per year in lieu of the liquid fuels tax funding. This has averaged about 60 percent of the program's annual revenues since FY 1990-91. This amount, established in Act 1983-32, has not changed in 13 years. Inflation pressures have effectively cut the purchasing power of this stipend by 50 percent.

In FY 1994-95 PennDOT expended an average of \$6,814 per mile to maintain functionally local state-owned roads. This cost exceeds the \$2,500 stipend by \$4,314 per mile. Not surprisingly, many townships have concluded that the cost of maintaining such roads currently outweighs the benefit of owning them. In particular, municipalities are reluctant to accept those road segments that include bridges because of the higher anticipated cost of the maintenance. In such cases, PennDOT may agree to maintain the bridge if the township will accept the transfer of the road. Some township solicitors are also concerned that accepting a road will increase the township's liability exposure.

To entice municipalities to accept additional turnback roads, PennDOT is considering seeking an increase in the annual maintenance payment to \$3,250 per mile. Knowing this, local governments have reportedly adopted a wait-and-see posture, slowing the turnback program even more.

Once the annual maintenance payments are met, 20 percent of the remaining State Highway Transfer Restoration Restricted Account balance (typically, 8 percent of total revenues) goes to the Secretary's reserve fund to give the Department the flexibility to implement or complete projects with special social and economic impact to local communities. Eighty percent of the remaining balance (typically, 32 percent of total revenues) is for the rehabilitation of the roads prior to transfer. Half of this is distributed among those counties whose Systematic Technique to Analyze and Manage Pennsylvania Pavements (STAMPP) state needs rank is between 1 and 22 (the most severe road conditions). The other half is distributed among the remaining counties whose STAMPP ranking is between 23 and 67.

Table 31

Road Turnback Program Revenues and Expenditures
(\$ Millions)

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|------------------|----------------|----------------|----------------|----------------|----------------|
| Revenues..... | \$15.2 | \$14.9 | \$16.4 | \$15.4 | \$15.7 |
| Expenditures: | | | | | |
| Maintenance..... | 8.1 | 8.4 | 8.9 | 9.3 | 9.4 |
| Restoration..... | <u>5.4</u> | <u>6.7</u> | <u>7.9</u> | <u>5.3</u> | <u>6.4</u> |
| Total..... | \$13.5 | \$15.1 | \$16.8 | \$14.6 | \$15.8 |

Source: Developed from information provided by PennDOT's Bureau of Municipal Services.

Under Act 1983-32, before a road is returned the Department and the municipality must agree on the improvements needed to restore the proposed turnback segment to an acceptable condition. The Department then estimates the improvement cost and, in most cases, gives a cash grant to the municipality. Municipalities may use their own crews or a hired contractor to complete the work.¹

Generally, more extensive restoration is required for the remaining turnback candidate roads because the easier roads were done first. From FY 1990-91 to FY 1994-95, the restoration expenditures increased from \$30,857 per mile to \$80,000 per mile, a 159 percent increase (see Table 32). Given current restoration costs and funding levels, PennDOT expects to be able to transfer only an additional 300 to 400 miles by the year 2000. The mileage turned back each year is portrayed in Exhibit 30.

Table 32

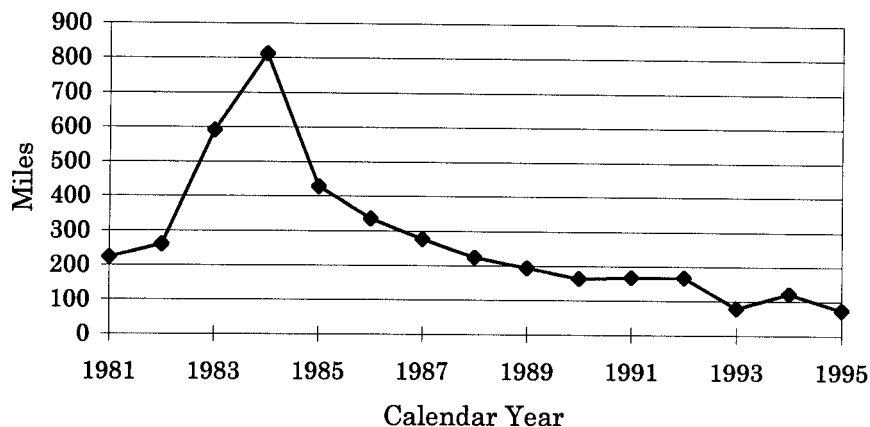
Road Turnback Program Expenditures Per Mile

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| <u>Maintenance</u> | | | | | |
| Cost..... | \$8,100,000 | \$8,400,000 | \$8,900,000 | \$9,300,000 | \$9,400,000 |
| Miles | 3,240 | 3,360 | 3,560 | 3,720 | 3,760 |
| Cost Per Mile..... | \$2,500 | \$2,500 | \$2,500 | \$2,500 | \$2,500 |
| <u>Restoration</u> | | | | | |
| Cost..... | \$5,400,000 | \$6,700,000 | \$7,900,000 | \$5,300,000 | \$6,400,000 |
| Miles | 175 | 138 | 148 | 104 | 80 |
| Cost Per Mile..... | \$30,857 | \$48,551 | \$53,378 | \$50,962 | \$80,000 |
| Total Cost | \$13,500,000 | \$15,100,000 | \$16,800,000 | \$14,600,000 | \$15,800,000 |

Source: Developed from information provided by PennDOT's Bureau of Municipal Services.

¹ PennDOT only infrequently restores the roads itself, either in-house or by contract.

Turnback Road Miles Per Year



Source: Developed from information provided by PennDOT's Bureau of Municipal Services.

PennDOT officials report that Pennsylvania's road turnback program is unique in that it is voluntary and provides both restoration money up front and an annual maintenance grant. This approach occupies a middle ground when compared to that taken by other states. Several state legislatures have enacted or are considering a mandatory road turnback program; others are attempting to be responsive to local government desires to turn back roads to state government.

The revenue available to Pennsylvania's road turnback program during the last five years averaged \$15.5 million per year. At this rate, annual maintenance payments alone will consume all of the fund once the mileage turned back, now at 3,760, reaches 6,213 linear miles. This will occur even sooner if the \$2,500 per mile annual grant is increased.

Recommendations

1. **The General Assembly should consider increasing the amount of the Oil Company Franchise Tax dedicated to the State Highway Transfer Restoration Restricted Account to allow an increase in the annual maintenance grant for new roads turned back to local governments.**
2. **Once a new annual maintenance grant is established, PennDOT should reconsider the roads it has targeted for local turnback to determine whether it could maintain the roads for less than the cost of the new maintenance grant. Such roads should be removed from turnback consideration.**

FINDING D1

The Rail Freight Program Is Being Better Integrated With Regional Economic Development Strategies

Summary: PennDOT administers a statutory grant program intended to preserve essential rail freight service and stimulate economic development. In 1990 we noted that PennDOT did not use a comprehensive rail freight plan or a broad based set of application criteria for awarding grants. In 1993 the Department and Penn State University collaborated to develop priorities and criteria for grant funding, including whether projects sustain economic development, increase rail transportation efficiencies, or improve safety.

We also found that until recently, these grants lacked coordination with other transportation and economic development initiatives. Such planning, however, has recently improved as a result of federal Intermodal Surface Transportation Efficiency Act (ISTEA) legislation that requires greater involvement by Metropolitan Planning Organizations, as required by the federal ISTEA and also includes Local Development Districts. The Department has also contracted for a comprehensive rail freight needs study to improve rail freight planning.

PennDOT's Bureau of Rail Freight, Ports and Waterways is responsible for administering monies allocated from the Commonwealth's General Fund to the Rail Freight Assistance Program (RFAP) established by the Rail Freight Preservation and Improvement Act, 55 P.S. §696.1 et seq. Financial assistance is available on a matching grant basis to owners and users of rail freight infrastructure whose proposals meet certain minimum project eligibility requirements.

Projects eligible for funding fall into two categories: maintenance/rehabilitation and construction. Maintenance/rehabilitation includes activities such as replacing ties, rails, plates, and turnouts to improve or maintain an existing railroad line. Maximum state funding for this category is \$250,000 or no greater than 75 percent of the total project cost, whichever is less. Maximum state funding for construction grants cannot exceed \$100,000, or no greater than 50 percent of the total project cost, whichever is less. Projects that exceed \$100,000 may become candidates for state capital budget authorization.

PennDOT has a grant evaluation and selection process in place to assist in awarding the Rail Freight Assistance Grants. The process uses criteria reflecting

the intent of the Rail Freight Assistance Program, the priority initiatives of the Commonwealth, and the limitations on availability of state funding. Grant applicants must demonstrate the public benefits of their proposed project in terms of:

- transportation cost savings for rail users;
- employment opportunities, jobs created, and jobs retained;
- the significance for improved rail freight service;
- generation of new economic development in the Commonwealth;
- location in an economically distressed community; and
- improved transportation efficiencies through the use of an intermodal facility.

The selection process also considers the readiness of the project for implementation, the viability of the rail carrier providing service, the financial need of the applicant, and the present condition of the track.

Improvements Since 1990

Our 1990 PennDOT performance audit found that PennDOT did not use a comprehensive rail freight plan or a broad-based set of criteria for ranking project applications. This practice changed in 1993 with the revision of the RFAP application¹ and has changed again recently as a result of an ongoing comprehensive rail freight study. Our review of the FY 1996-97 RFAP application found that it included well defined criteria to be used in the evaluation of projects.

Our 1990 audit also found that a “cost-per-job impacted figure” largely determined which applicants shared the limited funds available for accelerated maintenance and rehabilitation. As a result, funded projects reflected an emphasis on maximizing current employment opportunities instead of preserving or developing essential services to promote long-range economic development goals. The new revisions to the RFAP place greater emphasis on economic development when evaluating applications, resulting in less emphasis on maximizing current employment.

Our 1990 audit also found that the Department did not independently verify the job information the applicants submitted nor did it conduct a post-grant review to determine whether the projected job impacts were actually realized. The 1996-97 RFAP application requires that jobs created/retained information be verified by the applicant within one year after the completion of the project. The Bureau Director reports that the information on the RFAP application pertaining to jobs created/retained will now be looked at more closely in an effort to quantify the results of the rail freight grant program.

¹The 1993 revisions, developed with assistance from Penn State, included written criteria to reflect the intent of the program and attempted to measure rail safety and whether projects sustained economic development.

Comprehensive Rail Freight Study

Pennsylvania last undertook a comprehensive rail freight study in the mid-1980s. As noted below, since that time significant changes have occurred that require a more coordinated rail planning effort. To address these changes, the Department contracted with Main Line Management Services, Inc., to complete six tasks:

- develop an assessment of the Pennsylvania Rail Freight system;
- provide for regional participation to determine rail freight priorities;
- prepare a financial assistance application package for capital projects;
- recommend options for rail freight assistance and associated revenue sources;
- develop a plan to meet the FRA state rail plan requirements; and
- establish a pilot program for regional involvement.

As part of this study, a survey was made of agencies involved in regional and local planning throughout the Commonwealth. Twenty-two regional and local planning entities (MPOs and LDDs) responded. The survey was designed to determine the level of rail freight projects to be funded within the next five years, assess the role of the MPOs and LDDs in rail freight planning, measure the impact of ISTEA on the planning of rail freight, and assess actual resources that will be invested in rail freight planning. The study is due to be released in July 1996.

As noted above, the contractor has also reviewed and revised the RFAP application and the recommendations have been incorporated into the RFAP application for FY 1996-97. In particular, the evaluation criteria were revised to more strongly reflect economic development and railway safety as priorities within the program.

Coordinating Rail Freight Planning Efforts

The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) placed significantly more planning responsibilities at the regional and local level through the Metropolitan Planning Organizations (MPOs) and Local Development Districts (LDDs) for all transportation planning, including rail freight. According to the state's Comprehensive Rail Freight Study contractor, these local planning efforts need to be coordinated and made consistent with statewide policies so that there is a common framework within which rail freight projects can be evaluated. Coordination is also important because many of Pennsylvania's key rail lines run through several planning areas.

According to the contractor's draft report, the ISTEA planning requirements appear to have had little impact as of yet on the rail planning activities conducted

by the MPOs and LDDs. Respondents to the contractor's survey indicated, however, that ISTEA has increased the awareness of rail freight as a legitimate mode of transport. In an effort to better coordinate these projects with local needs, the Bureau of Rail Freight, Ports and Waterways has, for the first time, asked RFAP applicants to forward a copy of their RFAP application to their respective MPO or LDD. According to the Delaware Valley Regional Planning Commission (DVRPC), the MPO for southeastern Pennsylvania, it has received copies of eight candidate RFAP project applications for FY 1996-97. This marks the first time that RFAP projects have been forwarded to the DVRPC for their comment.

The Southwestern Pennsylvania Regional Planning Commission (SPRPC) believes ISTEA has changed the planning process dramatically and has led to more integration among the various modes of transportation. With respect to rail planning, the SPRPC has recently published a rail directory, contracted for a rail freight study in connection with the State's comprehensive rail freight study, and has begun the process of programming an intermodal project into their TIP.

A CEDA-COG representative reported that the advent of ISTEA has led to a bit more appreciation for all parties that are involved in the planning process. However, this official noted that because ISTEA does not provide for any additional specific rail freight monies, its impact on this mode of transportation may be limited.

FINDING D2

Capital City Airport Operates at a Deficit but Provides an Important Service to HIA

Summary: The Commonwealth owns three airports: Harrisburg International Airport (HIA), Capital City Airport, and Grand Canyon Airport. HIA operates at a profit, Grand Canyon generally operates at a small loss, and Capital City loses about \$500,000 annually. However, unlike the arrangements between the Pittsburgh airport and its reliever, HIA does not provide a subsidy to offset the costs of Capital City. Capital City needs these funds to conduct extensive repairs and renovations.

The Commonwealth of Pennsylvania owns three airports: Harrisburg International Airport, Capital City Airport, and Grand Canyon Airport. Five of the eight peer states used in this report also own one or more airports. PennDOT is authorized by the Aviation Code (74 Pa. C.S.A. §5101 *et seq.*) to operate and maintain airports which are owned or leased by the Commonwealth. PennDOT's Bureau of Aviation is assigned this responsibility.

Harrisburg International Airport. Harrisburg International Airport is a scheduled commercial-service class airport in Dauphin County. HIA, the third busiest airport in the state after Philadelphia International and Pittsburgh International, handled over 1.4 million passengers in CY 1994. The airport is used extensively by area residents, business persons, and state government officials. Five national airlines and five regional or commuter airlines provide commercial air service at HIA. The airport also provides an array of general aviation, cargo, and small package services that support many of the businesses in the area.

Capital City Airport. Capital City Airport is a business-service class airport in York County. Between 1930 and 1968, Capital City served the aviation needs of the Greater Harrisburg Area as the area's commercial service airport. Scheduled flights were shifted from Capital City to HIA in 1968. Capital City serves many of the general aviation needs that would otherwise be served at HIA and has been designated by the Federal Aviation Administration as the reliever airport for HIA. Relievers are general aviation airports located in metropolitan areas that the FAA has designated to reduce congestion at large primary airports and to provide additional access to general aviation. Relievers provide alternative landing sites for general aviation and other aircraft that might otherwise use commercial service airports.

Capital City has nine aviation-related tenants at the airport. Capital City is also home to several FAA offices. The Pennsylvania State Police and several area corporations have aircraft based at Capital City. The number of aircraft operations at Capital City in CY 1994 was 49,658, which represents about 57 percent of the level of activity at HIA.

Grand Canyon Airport. Grand Canyon Airport (GCA) is a general-service class airport in Tioga County. GCA has only one tenant and primarily serves the recreational flyer.

Capital City Airport Operates at a Deficit

From FY 1990-91 through FY 1994-95 Capital City Airport has operated at an average annual deficit of \$512,000. Grand Canyon also lost money in four of these years, but the dollar amounts were small. HIA has operated at an average annual 20 percent profit of about \$2.1 million (see Table 33).¹

Table 33

| State-Owned Airport Operating Revenues and Expenses | | | | | |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| (\$000) | | | | | |
| | <u>FY</u> <u>1990-91</u> | <u>FY</u> <u>1991-92</u> | <u>FY</u> <u>1992-93</u> | <u>FY</u> <u>1993-94</u> | <u>FY</u> <u>1994-95</u> |
| <i><u>Harrisburg International Airport</u></i> | | | | | |
| Revenues..... | \$9,116 | \$10,780 | \$8,504 | \$11,774 | \$10,469 |
| Expenses..... | <u>7,729</u> | <u>8,499</u> | <u>7,506</u> | <u>8,230</u> | <u>8,355</u> |
| Profit (Loss)..... | \$1,387 | \$ 2,281 | \$ 998 | \$ 3,544 | \$ 2,114 |
| <i><u>Capital City Airport</u></i> | | | | | |
| Revenues..... | \$ 896 | \$ 835 | \$ 956 | \$ 187 | \$ 799 |
| Expenses..... | <u>1,388</u> | <u>1,290</u> | <u>1,417</u> | <u>764</u> | <u>1,374</u> |
| Profit (Loss)..... | (\$ 492) | (\$ 455) | (\$ 461) | (\$ 577) | (\$ 575) |
| <i><u>Grand Canyon Airport</u></i> | | | | | |
| Revenues..... | \$ 34 | \$ 3 | \$ 130 | \$ 317 | \$1,150 |
| Expenses..... | <u>35</u> | <u>78</u> | <u>147</u> | <u>489</u> | <u>1,103</u> |
| Profit (Loss)..... | (\$ 1) | (\$ 75) | (\$ 17) | (\$ 172) | \$ 47 |
| <i><u>All State-Owned Airports</u></i> | | | | | |
| Revenues..... | \$10,046 | \$11,618 | \$9,590 | \$12,278 | \$12,418 |
| Expenses..... | <u>9,152</u> | <u>9,867</u> | <u>9,070</u> | <u>9,483</u> | <u>10,832</u> |
| Profit (Loss)..... | \$ 894 | \$ 1,751 | \$ 520 | \$ 2,795 | \$ 1,586 |

Source: Developed from information obtained from PennDOT's Bureau of Aviation.

¹Motor vehicle parking lot revenue is the pivotal factor which results in HIA operating at a profit rather than a loss.

Capital City Airport's operating loss does not affect the Commonwealth's General Fund but does impact the Aviation Restricted Account of the Motor License Fund, which is the source of funding for the state's aviation grants. When HIA and Capital City are viewed together, they had a combined average profit of \$1.6 million over the last five years. The use of HIA profits, however, is constrained by agreements signed on July 1, 1992, with the airlines operating out of HIA which prohibit PennDOT from shifting airline revenues from HIA to Capital City. PennDOT must invest this revenue back into airport improvements at HIA.

The current airlines' agreement at HIA also does not provide landing fee revenues or other compensation to Capital City for acting as a reliever airport. Allegheny County Airport, the FAA designated reliever airport for Pittsburgh International Airport, annually receives up to \$250,000 in operating subsidies and \$350,000 in capital funds from Pittsburgh International Airport. PennDOT Bureau of Aviation (BOA) officials report that the deficit at Capital City is directly attributable to the lack of financial support in the form of a portion of HIA landing fee revenue. They noted that the fuel burn for commercial jets (about \$100 a minute) waiting for small planes to get out of the way at HIA if Capital City did not exist alone justifies the assessment of a fee from airlines using HIA to support Capital City operations. The current agreement with the airlines at HIA expires on June 30, 1998.

Capital City Airport Needs Repairs and Renovations

Capital City, a large facility located in a populated area, requires a great deal of upkeep and is in need of many repairs and renovations. At the end of December 1995, PennDOT's Capital City Airport contractor manager, Johnson Controls, notified PennDOT they were terminating their agreement.² BOA now maintains operations at Capital City with a skeleton crew of three full-time employees. This staff replaced the five maintenance and services workers employed by Johnson Controls.

Since 1985, PennDOT has invested more than \$8.6 million in Capital City's runways, aprons, taxiways, lighting, and other facilities. However, Capital City has many old facilities, some of which need to be demolished and some of which require significant rehabilitation. During the previous administration, \$3 million in Capital City capital improvements were approved to rehabilitate or replace existing structures, but the Governor's Office never released the money. The current Administration has recently begun releasing monies for the first phase of needed hangar and terminal building improvements.

²BOA had hoped that Johnson Controls would be able to increase the revenue base at the airport through marketing efforts to attract more business. After two and a half years, PennDOT officials decided that the contractor's management team was not meeting PennDOT's expectations. Officials with Johnson Controls noted that they believed that the Commonwealth was going to supply the financial support necessary to make the airport more marketable. The former contractor believes the Commonwealth did not deliver on the commitment until after they withdrew as the contract operator.

Construction was recently completed on a new FAA facility at Capital City, and the airport road has been reconstructed. A new State Police facility is under construction. The area north of the existing terminal building has been designated for development as a commercial office park. It is hoped that development of this area will help increase airport revenue streams and allow the airport to obtain a more positive balance between its operating revenues and expenses.

Divestiture of HIA and Capital City Airport

For the past 16 years, PennDOT has been considering transferring ownership of state-owned airports to local control. Divestiture would shift the workload of BOA upper management and allow it to focus on the Bureau's primary mission, the statewide aviation program. PennDOT's aviation officials estimate that they currently spend about 80 percent of their time dealing with HIA matters.

Even while pursuing divestiture options, PennDOT believes it has a responsibility to make investments that are needed to ensure first-class operations, protect the environment, promote revenue potential, and support economic development. PennDOT's FY 1996-97 budget request proposed an initiative to improve the infrastructure and the economic potential of all three state-owned airports by issuing 20-year bonds, using tenant rental revenues to retire the debt. PennDOT also noted that HIA is expected to receive EPA Superfund delisting this fall--one year ahead of schedule. This decision should remove an impediment to both divestiture and to regional economic development.

The Commonwealth is in the process of deciding what goals it hopes to achieve by divesting itself of its airports. PennDOT contracted with Leigh Fisher Associates, a consultant that has performed similar services for other state governments and for the Newark, New Jersey, airport, to assist the Commonwealth in determining its goal. The consultant's report has been submitted to the Department, but it does not plan to release the report out of concern that it affect their negotiating position.

The Department sees HIA and Capital City as a package deal for divestiture. This position, while logical, does complicate the issue. FAA approval is needed for any deal, and it will want to ensure that any new owner is indeed capable of running both facilities. Additionally, according to PennDOT's aviation officials, the FAA is not willing to participate in or give parameters regarding a divestiture plan. PennDOT cites the FAA's recent disapproval of the sale of Stewart Airport in Newburgh by the State of New York as an example of the potential difficulties.

Current Status

One of the organizations that has expressed interest in taking over the operations of HIA and Capital City is the Susquehanna Aviation Task Force (SATF). SATF consists of an 18-member board that is serving the surrounding counties and Harrisburg. A consultant report done for SATF concluded that both airports would benefit from ownership by a local authority, noting that labor and benefit costs could be reduced and that cargo capabilities and general aviation landing fees could be increased.

The Secretary of Transportation has also stated that he believes that an authority is the proper manager for the airports. He reported, at the FY 1996-97 Appropriations Hearings in February and March 1996, that negotiating teams have been named by both parties and that he fully expects divestiture to go forward.

In March 1996 PennDOT received a proposal for the management of Capital City Airport from another group, a consortium formed by members of the Capital Region Economic Development Corporation and the York County Industrial Development Corporation. The proposal only addresses the management of Capital City Airport.

Recommendation

- 1. If the Department has not been able to divest itself of the Capital City Airport by June 30, 1998, the date the current HIA agreement is due to expire, the Department, in any new agreement, should seek terms authorizing the use of a portion of HIA landing fee revenues (or other compensation) to offset expenditures at Capital City Airport, HIA's designated reliever airport.**

FINDING D3

The Department Could Benefit From a Statutorily Established Aviation Advisory Committee

Summary: The Aviation Code does not provide for an advisory body to assist and advise the Department. This is in contrast with PennDOT's rail freight assistance program which has an active and productive Rail Freight Advisory Committee. The Bureau of Aviation has been using the Aviation Council of Pennsylvania, an informal group, as a de facto advisory committee. Statutory authority for such a group would add legitimacy and continuity in establishing a partnership with the aviation industry.

The Aviation Code (74 Pa. C.S.A. §5101 *et seq.*) establishes the authority of the Department of Transportation for aviation matters. Specific powers of the Department include providing for the examination, rating, and licensing of airports; operating and maintaining airports which are owned or leased by the Commonwealth; and encouraging and assisting in the establishment and construction of airports. The Department, through the Bureau of Aviation, is also active in administering an aviation grant program funded with moneys from the aviation fuel tax and matched with local and federal dollars. Additionally, the Department oversees the aviation segment of the state capital projects grant program, conducts airspace reviews, and performs other functions related to airport and aviation development. Neither the Administrative Code nor the Aviation Code provides for an advisory body to assist the Department in performing these functions.

The Aviation Council of Pennsylvania

The Bureau of Aviation has been using the Aviation Council of Pennsylvania as a de facto advisory body. Council members include airport managers, maintenance people, engineers, lawyers, representatives of charter services, and fixed-base operators. Currently there are no airlines represented on the Council and no legislative or public-at-large members.

In recent years, the Council had worked with Penn State and the Bureau of Aviation to revise the aviation grant process by developing a rating system that is currently being used to rank grant proposals. Additionally, the Council and the Bureau co-sponsor a yearly aviation conference, and have co-sponsored workshops on topics such as flight instruction and underground storage tanks located at airports.

The Aviation Council of Pennsylvania supports the Deputy Secretary of Aviation's desire to create an aviation advisory body in statute and is currently working with the Deputy and her staff to draft the legislation necessary to make this change.

The Deputy Secretary for Aviation informed LB&FC staff that a statutory authorization creating an aviation advisory body would be helpful in assisting the Deputy in carrying out his or her assigned duties. An advisory body could assume a role in preparing an annual report, serve as a forum for the debate of aviation related issues and problems, be a liaison to the aviation industry, and, if the membership included legislators, could provide for legislative input. The Deputy Secretary noted that establishing the advisory committee in statute would give it added prestige and legitimacy to carry out these functions. The body could also play a formal role in reviewing and prioritizing aviation development grants.

Membership on an aviation advisory body could include aviation experts, airlines, airport owners and managers, local and regional planning groups, legislators, and the public. Such diverse membership would ensure that the broad range of aviation interests would be represented.

The Rail Freight Advisory Committee

The Rail Freight Preservation and Improvement Act established the Rail Freight Advisory Committee to assist the Department in carrying out its functions under the act. The Committee consists of 24 members, including state officials, leadership positions from the Transportation Committees in the House and Senate, and 17 members of the public who are appointed by the Governor to represent the areas of concern specified and who have extensive experience and knowledge of rail freight transportation activities throughout the Commonwealth. These persons include, for example, representatives from railroad companies, rail shippers, and regional/local planning groups.

In a November 1992 performance audit, we found the Rail Freight Advisory Committee to be an active and productive organization that performs several meaningful functions. Specifically, the Committee is charged to provide advice and comment on the comprehensive rail freight study and to propose methods, strategies, or technologies for improving rail freight transportation services, systems, or facilities within the Commonwealth. The Committee played a key role in planning and coordinating the Commonwealth's double stack intermodal/clearance project and in developing a methodology for the Department to use in ranking projects to receive state rail freight assistance funding. The Committee has several active subcommittees and periodically sponsors statewide conferences.

Although in our 1992 report we were not able to determine the precise cost to the Commonwealth for the Rail Freight Advisory Committee, the administrative support and per diem costs for members appeared to be minimal. Although Committee members are entitled to a \$75 per diem, only two RFAC members had requested reimbursement. PennDOT estimated that the Committee's administrative costs amounted to approximately one-quarter of the salary of one PennDOT employee.

Recommendation

- 1. The General Assembly should consider amending the Aviation Code to provide for an aviation advisory body to the Department of Transportation. The aviation advisory body should include aviation experts; representatives of airlines, airport owners, and managers; representatives of local and regional planning groups; legislators; and one or more members of the general public.**

FINDING E1

MLF Revenue Growth Is Projected to Be Flat; Possible Sources of New Revenue Include a Gas Tax Increase, Bonds, Higher Vehicle Registration Fees, Tolling Roads, and Increased Public/Private Partnerships

Summary: Motor License Fund revenues come primarily from the state liquid fuels tax, driver's license and registration fees, and federal funds. Little revenue growth is projected from any of these sources. Therefore, if Pennsylvania is to do much more than maintain its existing transportation infrastructure, new sources of revenue will be needed. Proposals include increasing the gas tax; increasing vehicle registration, overweight truck permit, and other fees; issuing bonds; tolling existing interstates and/or constructing new private toll roads; and promoting public/private partnerships.

The Motor License Fund (MLF) is a special fund composed of monies received from Liquid Fuels and Fuel Use Taxes, motor vehicle licenses and fees, aviation revenues, federal aid for highways and airports, and other miscellaneous highway revenues (see Table 34). Although MLF revenues increased by 15.8 percent between FY 1989-90 and FY 1994-95, in constant dollars which better reflect actual purchasing power, revenues have actually decreased by 3.1 percent (see Exhibit 31).

State liquid fuels tax collections for FY 1995-96 are anticipated to be only 0.7 percent higher than in FY 1994-95. The small increase is due primarily to improved fuel efficiency; the average fuel efficiency of U.S. passenger vehicles has increased from 13.5 mpg in 1974 to 21.9 mpg in 1994. To some extent, the improved efficiency may be offset by increased fuel consumption due to higher speed limits and a trend toward heavier, less fuel efficient vehicles such as sport utility vehicles.

Overall, the Department projects the total MLF growth from FY 1996-97 through FY 2000-01 will be only 0.6 percent over this next four-year period. Federal funds, which also rely heavily on gas taxes, are also projected to be flat for at least the next several years.¹

According to a State Transportation Advisory Committee report in December 1994, additional state revenues of \$298 million per year are needed just to maintain

¹The amount available to the states from the Federal Highway Trust Fund also depends on the extent to which Congress uses the fund balance to reduce the overall federal budget deficit.

Table 34

Motor License Fund Revenues

(\$ Millions)

| Source | FY 1989-90 | FY 1990-91 | FY 1991-92 | FY 1992-93 | FY 1993-94 | FY 1994-95 | % Change |
|---|------------|------------|------------|------------|------------|------------|----------|
| Liquid Fuels Taxes..... | \$ 928.2 | \$ 926.0 | \$ 925.0 | \$ 986.0 | \$ 954.0 | \$ 982.6 | 5.9% |
| Motor Licenses and Fees..... | 456.0 | 459.3 | 467.1 | 472.0 | 476.4 | 505.7 | 10.9% |
| Other Motor Receipts ^a | 99.6 | 87.8 | 74.6 | 66.7 | 72.3 | 71.4 | -28.3% |
| Unrestricted State Funds Total..... | \$1,483.8 | \$1,473.1 | \$1,466.7 | \$1,524.7 | \$1,502.7 | \$1,559.7 | 5.1% |
| Federal Funds..... | \$ 718.3 | \$ 578.3 | \$470.4 | \$ 575.5 | \$ 735.0 | \$ 800.9 | 11.5% |
| Restricted Revenue..... | 173.3 | 175.6 | 332.0 | 451.5 | 368.8 | 398.1 | 129.7% |
| Augmentations..... | 34.9 | 37.2 | 25.9 | 31.1 | 24.9 | 32.3 | -7.4% |
| Total..... | \$ 926.5 | \$ 791.1 | \$ 828.3 | \$1,058.1 | \$1,128.7 | \$1,231.3 | 32.9% |
| Grand Total..... | \$2,410.3 | \$2,264.2 | \$2,295.0 | \$2,582.8 | \$2,631.4 | \$2,791.0 | 15.8% |

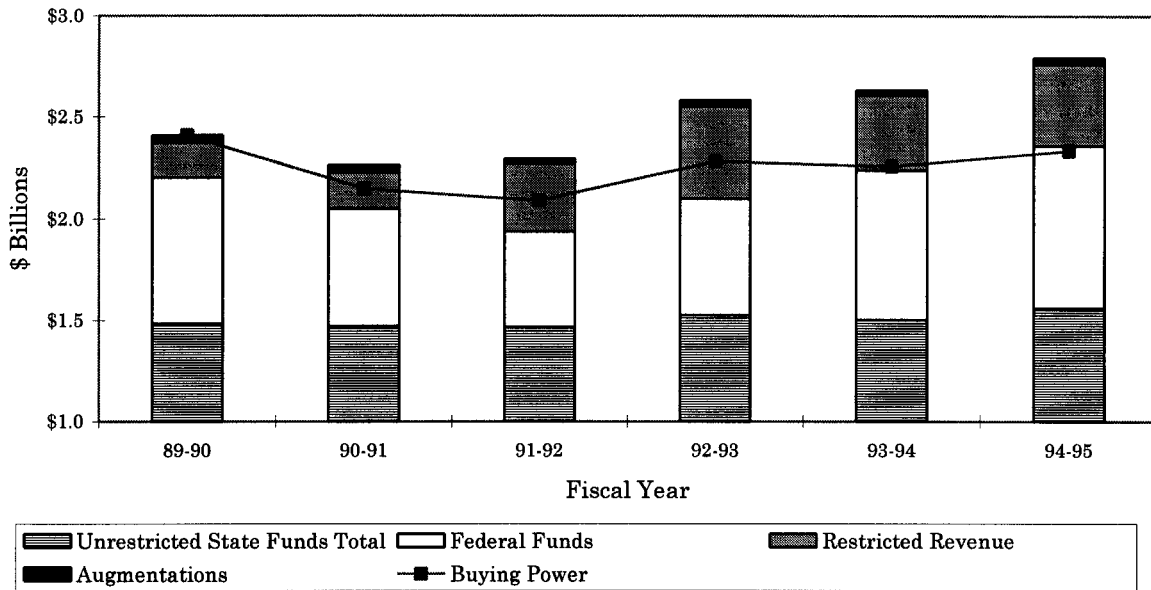
^aIncludes revenue derived from fines, interest on securities, sale of inspection stickers, the Gross Receipts Tax, and others.

Sources: Developed from *LB&FC Statistical Digest*, 1991-96, and the *Governor's Executive Budget*, FY 1991-92 through FY 1996-97.

the condition and general efficiency of the transportation system as it exists today. The Committee estimated it would require an increase in state revenues of \$726 million per year to meaningfully improve the Commonwealth's transportation system.

Exhibit 31

Motor License Fund Revenue



Source: Developed from LB&FC *Statistical Digest*, the Governor's Executive Budget, and information provided by the U.S. Department of Labor, Bureau of Labor Statistics.

Initiatives and Proposals to Increase or Leverage Transportation Resources²

PennDOT has developed a Policy Plan Action Agenda to take advantage of conventional federal and state funding sources, to expand the total transportation program in Pennsylvania, to attract greater public and private investment, and to coordinate infrastructure investments among state and local governments. A one-page outline of this Agenda is presented on Exhibit 32. Several of these and other proposals that have been made either in Pennsylvania or other states to generate additional resources for transportation needs are presented below.

² Recommendations to improve the efficiency and effectiveness of the Department's current spending are included throughout the report (see for example Findings A2, A3, A5, A7, B6, C2, and E2.) This report does not address broader policy decisions such as the decision to allocate a portion of the Oil Franchise Tax monies to the Pennsylvania Turnpike rather than PennDOT or the decision to fund the Pennsylvania State Police from the Motor License Fund rather than the General Fund. See also a discussion of PennDOT's tort liability at Appendix J.

Pennsylvania Policy Plan Action Agenda

| <u>Goal, Recommendations, Action Item</u> | <u>Near</u> | <u>Mid</u> | <u>Long</u> |
|---|-------------|------------|-------------|
| Goal 4: Funding, Financing | | | |
| <i>Recommendation A: "Opportunistic" Financial Strategy</i> | | | |
| <i>Take maximum advantage of conventional federal and state funding sources.</i> | | | |
| 1. Study the appropriateness of initiatives to minimize modal constraints on use of state funds. | | X | |
| 2. Consider recommendations from the State Transportation Advisory Committee's fiscal alternatives study. | X | | |
| 3. Coordinate with local officials on possible applications for special Federal Funding for Congestion Pricing. | | X | |
| 4. Consider initiatives that will better insulate the transportation funding base from inflation, such as tying fees to the Consumer Price Index and research new technology for collecting user fees. | X | X | |
| 5. Capitalize on the full range of new federal funding flexibility: <ul style="list-style-type: none"> • Identify opportunities to apply the new FHWA innovative finance funding and test the use of apportioned funds from the Federal Experimental Program (including soft match credit, tapered federal participation/phased funding, and non-cash/non-federal share) to maximally leverage state resources and to advance projects. • Pursue all reasonable and advantageous federal discretionary programs, such as Intelligent Transportation System. | X | X | |
| 6. Consider test to screen projects with future claims on PA Turnpike Commission revenues. | | | X |
| 7. Consider transportation revenue-generating actions proposed by participants in the Policy Plan Study, such as: <ul style="list-style-type: none"> • Enabling local municipalities to piggy-back on the state gas or sales tax for local transportation projects. • Assessment of impact fees as an equitable way of paying for new transportation facilities. • Increase the fuel tax and/or impose a mileage tax dedicated to transportation. • Fund "Special Projects" with "Special Funds," including cost increases. | X | X | X |
| <i>Recommendation B: Increase Program and Funding</i> | | | |
| <i>Expand the total transportation program in Pennsylvania to attract greater public and private investment.</i> | | | |
| 8. Enable Pennsylvania to use new ISTEA provisions for public/private co-funding for new/reconstructed roads/bridges as public/private partnerships. | | X | |
| 9. Consider state revolving loan fund (seeded with both state and federal aid) and full range of new credit enhancements to support potential private or public toll roads as a test under the FHWA federal innovative financing initiative. | | | X |
| 10. Consider partnerships with private industry regarding new transportation technology development and implementation, for both in-state and national deployment. | X | X | X |
| 11. Consider revised procurement procedures to facilitate solicitation of potential public/private partnership projects. | | X | X |
| <i>Recommendation C: Maximize Investment Impacts</i> | | | |
| <i>Coordinate infrastructure investments among public sector entities--state and local--for maximum public benefit.</i> | | | |
| 12. Initiate lead agency concept for transportation-related infrastructure investments to insure communication, cooperation, and coordination. | | X | |
| 13. Consider the development of decision guidelines for the use of state funds, ensuring maximum leverage of total public and private funding sources. | | X | |

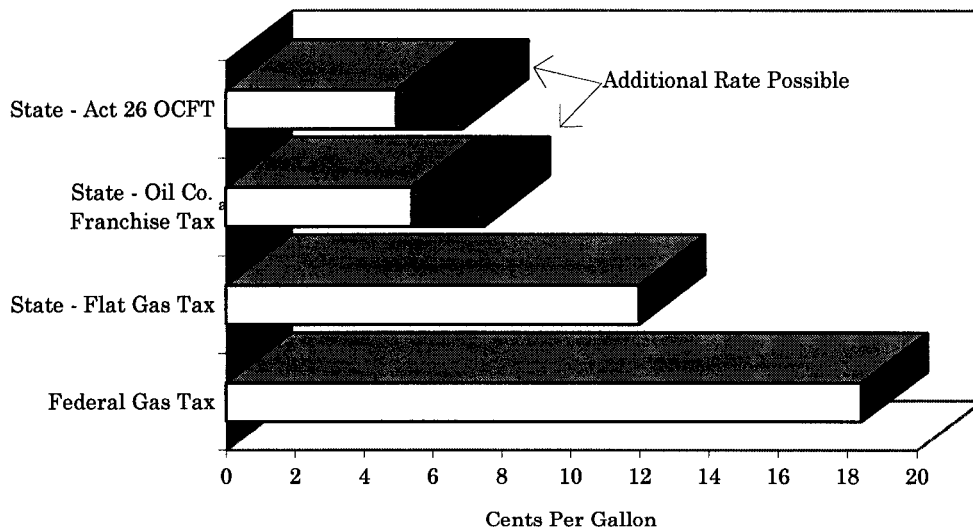
Increase the Gas Tax

In March 1996 the Governor proposed a 6.5 cent increase in the state's gas tax to generate \$358 million annually for repairs to roads and bridges. The additional 6.5 cent tax revenue would be split evenly between maintenance and new construction but not until after initial revenue is used for disaster repairs from the 1996 blizzard and flood.

Pennsylvania motorists now pay 22.35 cents in state tax on every gallon of gas (see Exhibit 33). For the average motorist who drives 11,255 miles per year, the proposed increase would add about \$33.41 annually to the driver's fuel bill.³ Presently, Pennsylvania's gas tax ranks 12th in the nation. A 6.5 cents per gallon increase would elevate Pennsylvania's state gas tax to the nation's third highest, behind Connecticut's 33 cents and Rhode Island's 29 cents. Federal taxes (currently at 18.4 cents per gallon) increase the current total liquid fuels tax to 40.75 cents per gallon in Pennsylvania. Under the proposal, diesel tax rates would also increase by 6.5 cents and would become the nation's highest. The last time the state raised the gas tax was in 1991.

Exhibit 33

State and Federal Gas Tax Rates in Pennsylvania



^aThe Oil Company Franchise Tax is based on the cost of crude oil, refining, distribution, and retail costs, presently at 88.25¢. The minimum tax is 90¢ per gallon even if the wholesale costs drop below 90¢. The maximum tax is \$1.25 per gallon even if the wholesale costs are above \$1.25. The wholesale costs have not been above 90¢; thus 90¢ on 115 mills (60 + 55) is the present tax of 10.35¢.

Source: Developed from information provided by PennDOT's Executive Office.

³This is based on average annual fuel consumption of 514 gallons at an average fuel efficiency of 21.9 miles per gallon.

Gas taxes can be viewed as user fees, with those using highways the most paying the most. Others see gas taxes as regressive because the cost to purchase a given quantity of gasoline comprises a larger share of the income of lower income taxpayers. Also, some rural families may pay more on an annual basis because of longer trip distances. Higher gas prices can also affect the cost of other consumer goods as manufacturers and distributors raise prices to offset increased delivery costs.

Use General Fund Monies

Unlike Pennsylvania, many states use general fund monies to help support their state highway systems. Twenty-eight states pay for road maintenance and construction at least partially out of their general funds. Fifty percent of the states also use revenues from sales and other taxes for state-administered highways. New Jersey's Transportation Trust Fund, for example, receives about a fifth of its revenue from sales and income taxes.

Increase Overweight Truck Permit Fees

Trucks on Pennsylvania's roads are responsible for 16 percent of the traffic on interstate highways in the Commonwealth, more than in any other state on the eastern seaboard. Because highway wear increases with a vehicle's weight, many state and federal officials believe that overweight trucks, in particular, do not pay for all the wear and tear they cause.

PennDOT currently charges overweight trucks a flat \$15 per trip for a permit plus 3 cents per ton mile for the number of tons it is over its registered gross weight when empty. Although comparisons with other states are difficult because fee structures vary, Pennsylvania's fees do appear to be low relative to other states. (See also Finding A12.)

Increase Vehicle Registration Fees

The cost to register a passenger vehicle in Pennsylvania is among the lowest in the nation. Pennsylvania's fee is \$24 for cars and \$39 for light duty noncommercial trucks. Nationwide, the average cost to register a late model passenger vehicle ranged from \$151.95 to \$279.21 depending on the type of vehicle. A current House bill proposes to raise fees for motorized vehicles by \$20 per year, except for motorcycles which would be subject to a \$10 increase. The bill proposes no fee increases for mass transit buses, school buses, state vehicles, trailers, or farm machinery. It is estimated that such an increase would bring in an additional \$169 million per year to the MLF. (See also Finding B4.)

A related suggestion that has been made is to impose a 1 percent sales tax on the purchase price of a motor vehicle. Such a tax is estimated to generate \$106.4 million annually.

Issue Bonds

From June 30, 1980, through June 30, 1995, outstanding bonded indebtedness for highways and bridges decreased from \$1.8 billion to less than \$1.0 billion. The debt service requirement to pay off the principal and interest on these bonds was \$1.3 billion on December 31, 1995. The debt service for these bonds as a percentage of the Motor License Fund revenue decreased from 17.1 percent in FY 1979-80 to 12.7 percent in FY 1994-95.

As shown in Table 35, when only highway debt is considered, the debt service drops from 11.4 percent of the Motor License Fund in FY 1994-95 to 5.1 percent in FY 2000-01.

Table 35

Highway and Bridge Debt Projections and Debt Ratios (\$ Millions)

| <u>Debt Ratio Projections</u> | <u>1994-95</u> | <u>1995-96</u> | <u>1996-97</u> | <u>1997-98</u> | <u>1998-99</u> | <u>1999-00</u> | <u>2000-01</u> |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Motor Fund Revenues | \$1,559.6 | \$1,562.4 | \$1,549.7 | \$1,562.9 | \$1,572.5 | \$1,581.1 | \$1,589.3 |
| Bridge Revenues..... | 75.4 | 72.7 | 69.9 | 71.0 | 71.6 | 72.4 | 73.0 |
| Highway Debt Service | 177.5 | 150.1 | 118.1 | 113.8 | 110.9 | 98.5 | 80.3 |
| Bridge Debt Service..... | 30.6 | 30.1 | 19.2 | 29.7 | 29.6 | 28.4 | 26.3 |
| Percent of Revenues | | | | | | | |
| Highway Debt Service. | 11.38% | 9.61% | 7.62% | 7.28% | 7.05% | 6.23% | 5.05% |
| Bridge Debt Service..... | 40.58% | 41.40% | 27.47% | 41.83% | 41.34% | 39.23% | 36.03% |

Source: Developed from data provided by the Office of the Budget.

The borrowing debt limit of the Commonwealth is \$30.9 billion.⁴ The Commonwealth's total outstanding debt is projected to be \$3.9 billion on June 30, 1996, or 12.6 percent of the debt limit. The bond indebtedness for highways and bridges is a part of this debt. Adequate Commonwealth borrowing capacity is, therefore, available to incur additional bond indebtedness.

The rationale for bond financing is that motorists should not be expected to completely pay today (i.e., out of current revenues) for capital improvements that will be providing benefits over the next 30 years. The Governor, however, has stated that he believes it best to avoid borrowing money for roads, a lesson he believes the state learned the hard way in the 1970s. (The MLF will pay \$136 million in debt-service expense (principal and interest) in FY 1995-96 for highway loans made in the 1970s.) The Department also notes that any future debt service payments will reduce funds available to maintain existing roadways at a time when revenues are not increasing.

⁴The Pennsylvania Constitution provides that the state's indebtedness cannot exceed 1.75 times the average tax revenues of the previous five fiscal years.

In comparison with the 11 states we reviewed for this purpose, in 1994 Pennsylvania ranked fourth in the total amount of bonds outstanding for state DOT-maintained highway and bridges at \$1.1 billion and fifth in the amount of bonds outstanding per state DOT-administered lane mile at \$11,956 (see Table 36).

Table 36

**Bonds Outstanding for State DOT-Maintained
Highways and Bridges: 1994**

| | Bonds Outstanding (\$000) | State DOT- Administered <u>Lane Miles</u> | Bonds Outstanding <u>Per Lane Mile</u> |
|--------------------|---------------------------------|---|--|
| New Jersey | \$1,231,845 | 8,860 | \$139,034 |
| New York..... | 3,956,608 | 40,550 | 97,574 |
| Illinois..... | 1,424,076 | 43,543 | 32,705 |
| Michigan..... | 752,875 | 26,774 | 28,120 |
| Pennsylvania | 1,071,164 | 89,590 | 11,956 |
| Maryland | 140,845 | 14,791 | 9,522 |
| Ohio..... | 446,315 | 48,924 | 9,123 |
| Virginia..... | 488,910 | 123,744 | 3,951 |
| Minnesota..... | 64,040 | 29,231 | 2,191 |
| North Carolina ... | 55,285 | 163,554 | 338 |
| Missouri..... | 0 | 68,784 | 0 |

Source: Developed from FHWA's *Highway Statistics, 1994*. Includes state obligations for local highways, but only Maryland, Michigan, New Jersey, and New York have such obligations. Bonds for state-administered toll roads and crossing facilities are excluded for all states.

Reduce the Motor License Fund Balance

The Motor License Fund (MLF) has historically maintained a high fund balance that some have suggested could instead be used to finance transportation needs. According to an official at the Office of the Budget, the Department of Revenue is very conservative in estimating revenues. This has often resulted in high year-end fund balances. As shown in Table 37, the average estimated MLF fiscal year-end balance from the end of June 1990 through the end of June 1995 was \$4.1 million, while the actual average MLF end of June balance during this six-year period was \$74.6 million.

Table 37

Motor License Fund Balance*

Estimated vs. Actual
(\$000)

| <u>Fiscal Year</u> | <u>Estimated Balance</u> | <u>Actual Balance</u> |
|-----------------------|--------------------------|-----------------------|
| 1989-90..... | \$8,073 | \$ 56,356 |
| 1990-91..... | 5,401 | 60,497 |
| 1991-92..... | 1,866 | 22,103 |
| 1992-93..... | 3,144 | 82,162 |
| 1993-94..... | 5,419 | 107,471 |
| 1994-95..... | 963 | 119,151 |
| 1995-96..... | 13,564 | -- |
| 1996-97..... | 9,695 | -- |
| Average Balance | \$4,144 | \$74,623 |

*Nonrestricted state funds only.

Source: Developed from Governor's Executive Budget.

Toll Existing Roads

A bill recently introduced into the Senate requires PennDOT to study the feasibility of converting existing state highways into privately operated toll roads. Under current federal and state law, any roads other than existing free interstate highways can be turned into toll roads.⁵ The Governor is reported to believe that, at most, the federal government might permit tolling on existing free interstates if the toll revenue to be generated is limited to that needed to upgrade the road. The Administration believes that it will take years before federal and state authorization is secured to toll such roads as Interstate 80.

One Pennsylvania legislator has suggested that I-80's 360-mile roadway could be strategically tolled with major toll plazas at the Ohio border, at the bridge crossing over the Clarion River, and at the New Jersey line. Most local usage for daily commuting would be unaffected by such an arrangement. PennDOT estimates that it annually expends \$3 million for winter services, \$6 million for routine maintenance, and \$50 million for reconstruction on I-80.

Those opposing additional toll roads believe that trucking firms would add the cost of the tolls to their cost of doing business, that companies using cars would

⁵Under the Intermodal Surface Transportation Efficiency Act of 1991, new highways can be tolled even if federal money is used in construction. ISTEA allows such highways to be built privately or through public/private partnerships. Federal funds can also be used on toll-financed improvements of existing toll-free, non-interstate highways and to improve existing toll highways and bridges.

add the tolls to their expenses, that commuting costs would increase, and that some prospective businesses would be disinclined to locate in Pennsylvania.

The revenue benefits of tolling existing or new highway infrastructure can also converge with the congestion management benefits achieved by varying, by time of day, the decision to toll and the amount of toll charged on highways, on dedicated lanes, and on selected entrance or exit ramps. The cost of constructing (and operating if not automated) any toll facility, and any delays which may occur as a result of traffic queued up to pay the toll, must also be considered when evaluating the feasibility of tolling.

Toll Privately Built Highways

A Senate bill has been introduced in the Pennsylvania General Assembly to allow private firms to build and maintain roads while collecting tolls, with the roads eventually being returned to state control. Several states have allowed private firms to construct and toll such private highways. California has authorized four such highways, one of which is now open. A 14 mile private toll road opened in Virginia in 1995. Exhibit 34, at the end of this finding, provides additional information on these roads and privately built toll roads in three other states.

Many believe that the business incentives impelling private highway developers could enable them to provide desirable highways that government could not provide at a reasonable cost to the taxpayers. Privately built highways could cater to the special needs of truckers with liberalized width, height, and weight limits, and to car drivers by providing car-only lanes and real time information about congestion, parking space availability, and commercial services. Private highway developers could solicit right-of-way donations, contributions to offset the cost of interchanges, and investment monies from landowners who stand to benefit from development opportunities. Private highway builders could also buy land around proposed interchanges and benefit from the enhanced land values.

FHWA Innovative Financing Arrangements

The Federal Highway Administration's (FHWA) Innovative Financing Initiative was created to help states take full advantage of the flexible financing opportunities allowed under the ISTEA legislation. Some of the more important initiatives offered include flexible matching; bond and other debt financing; Section 1012 loans; Section 1044 toll investment credits; advance construction; partial conversion of advance construction; phased funding; and tapering.

Under the flexible matching program, states can use private donations toward the state's non-federal share requirement. Under the NHS legislated bond program, a state's cost for bond principal, interest costs, and other bond issuance expenses can be eligible for reimbursement with federal funds. Any project eligible for federal aid that is financed with debt can have the debt and related costs paid

with federal funds; the payments, however, would be part of, not in addition to, the state's normal Federal Highway Trust Fund allocation.

Under the Section 1012 loan program, states have the flexibility to negotiate interest rates and other terms with a project "sponsor," which may be either a public or private entity. Federal funds can then be used to reimburse the state up to the federal share of the project cost. The project sponsor can repay the state with revenue generated from the project. When the loan is repaid, the state can recycle the funds for other transportation projects. Pennsylvania may also be able to obtain money from the Federal Highway Trust Fund through a new program whereby funds are loaned to government agencies to build roads which are then repaid through toll revenues.

Under the Section 1044 toll investment credit program, state DOTs can receive investment credits to expand the role of toll authorities in constructing or reconstructing the state highway system. This credit can then be applied toward the non-federal matching share of toll roads.

The state may also construct a project with its own funds or short-term notes and still preserve the option to obtain federal reimbursement in later years. Such projects, known as advance construction projects, may be converted to a regular federal aid project in increments (partial conversion) over several years, thus providing a cash stream as needed throughout the life of the project.

Under the phased funding initiative, a state can begin a project before it has accumulated all the federal obligation authority needed for the project. This would permit a state to begin two large projects at once, as long as sufficient budget capacity is available to cover the obligations. Previously the entire amount of obligation authority required for a project had to be available before the project could begin.

Under the tapering initiative, a state can bring a project through the high-risk phase with more cost effective federal aid funds before seeking bond and capital market financing or state and local financing, thus lowering interest costs.

Pennsylvania is among the states taking advantage of some of these options. A project to improve and widen Airport Road in the Lehigh Valley near the airport is using flexible matching. It is a PennDOT partnership with an industrial park match and the airport's donation of the right-of-way. PennDOT has also used partial conversion of advance construction funds for major reconstruction projects on I-90, I-78, and I-70, and will expand by as much as 5 percent the state's FFY 1995 FHWA limit or ceiling on the total obligations it can incur, making it possible to advance other "ready-to-go" projects under that limit earlier in the authorization period.

Increase Public/Private Partnerships

One of the Department's long-term objectives is to promote investment and technology transfers through public/private partnerships. Listed below are examples of such partnership initiatives and opportunities:

- A Villanova University underpass costing \$5.2 million has PennDOT paying less than one-half the cost. Villanova is paying for the design.
- The \$584,699 cost of a safety improvement project, widening the intersection and adding a traffic signal in Upper Gywnedd Township, was shared by the township, Merck and Company, and PennDOT, with PennDOT contributing \$126,000 through the Highway Turnback Program.
- A six mile project on Route 19 in Cranberry Township will be resurfaced with additional turn lanes and improved intersections. The project involves a partnership among Cranberry Township, PennDOT, and Wyn Company, the developer of the Cranberry Square Mall along Route 19.
- Lower Swatara Township officials believe they have enough private backing to build on-off ramps at the North Union Street entrance to Route 283. They believe they can raise the 20 percent needed from local businesses to get the project moving by persuading the state to start the project and release federal funding. The project, however, needs to be in the first four years of the Twelve Year Plan.
- Allegheny County has a consultant evaluating the financial feasibility of private financing for the Airport Toll Road, which is a part of the Airport Multi-Modal Corridor Project.
- A private developer in District 8-0 wants to develop a business center on a 380 acre tract and has offered to share the cost of more than \$5 million in highway improvements with PennDOT. Another \$2.9 million would be spent on streets within the complex. The developer pledged to finance \$2.1 million in improvements along Routes 11 and 465 in exchange for PennDOT handling construction of the I-81 interchange. The developer wanted to be placed on the Twelve Year Transportation Plan, but officials were reluctant to approve it over other projects.
- Several Clearfield County bridge projects are on indefinite hold as they wait for state assistance. The County Commissioners have agreed to investigate undertaking the projects independently, giving up state aid but exempting the projects from many costly state regulations. In many cases, the project can be done faster, more efficiently, and at significantly lower cost without state funding, according to a private sector engineer.

Sell Services

New Jersey is drafting a plan to sell Department of Motor Vehicle databases to insurance companies and direct mail advertisers to raise \$11 million. New York has been making registration records available since 1941 for a fee. Motorists can opt out by checking a box on the forms to register or re-register their vehicle.

One PennDOT District Engineer suggested that the cost of painting bridges could be reduced by allowing organizations to advertise on the bridge in exchange for contributing toward the cost of painting the bridge.

Examples of Public/Private Partnerships in Other States

California

California passed a law allowing its state DOT (Caltrans) to solicit private sector bids to build and operate toll roads. No state money is permitted to be used for construction or operation, although local government money is permissible and tolls are not subject to regulation. The private company transfers title to the state immediately after construction. At the end of the 30-year franchise, the private firms' rights to operate the toll road cease. The first project completed is the SR 91 Express Lanes project in Orange County. Ten miles of new four-lane highway was constructed in the median of existing highway. Fees are collected by debiting motorists' prepaid accounts by radio signal through a calculator-sized transponder stuck on the windshield, so motorists are not required to stop at toll booths. The project uses congestion pricing with tolls ranging from \$.25 to \$2.50, depending on available capacity.

The road was opened in December 1995 at a cost of \$126 million. More than 30,000 transponders are in use on the facility--a figure officials didn't expect to reach until late June 1996. If traffic becomes so heavy that delays begin to occur, fees will be raised until some of the overload shifts to the old road. The public/private agreement calls for the private partner to pay for law enforcement, operation, and maintenance. According to PennDOT's Secretary, this toll road has the high auto volume and wealthy demographics ideal for a for-profit venture. It was built on a right-of-way that is entirely public lands. Pennsylvania does not have a replicable situation.

Three other private toll roads were approved by California in 1991, including SR125S, an 11-mile north-south tollway southeast of San Diego linked to the Mexican border; SR 57S with 10 miles of cars-only elevated lanes over the Santa Ana River flood channel; and the Mid-State Tollway on the eastern fringe of the San Francisco-Oakland area.

Virginia

Virginia's first modern era private toll road, opened in September 1995 at a cost of \$326 million, is 14 miles of four-lane divided freeway from Dulles Airport to Leesburg through largely undeveloped countryside in Loudoun County on the growing western fringe of the Washington metropolitan area. The private tollway is an extension of the state-operated Dulles Toll Road that is connected to the Capital Beltway and I-66.

The Dulles Greenway has struggled in luring commuters to pay the one-way \$1.75 toll, so the private operator has cut the toll to \$1 indefinitely. Traffic increased by 65 percent since the toll was reduced March 8 but is still only at 17,300 drivers a day. Before the toll was reduced, traffic had averaged about one-third of the 34,000 drivers a day that the company needed by the end of the first year to make its loan payments. By law the Commonwealth of Virginia is not allowed to bail out the Greenway if it does not make enough money to keep up debt payments. The Greenway has also suffered from not having

Exhibit 34 (Continued)

nonstop electronic toll collection. An automated toll collection system was initiated in mid-April allowing tolls to be deducted electronically for those motorists with prepaid accounts. Virginia state officials have also allowed the Greenway to post a 65 mph speed limit to lure more commuters. Price Waterhouse estimated that the toll road will pay \$96 million in local property taxes and \$450 million in state and federal taxes over the life of its 40-year franchise.

Washington

In Seattle, the State Transportation Commission has authorized six private/public partnership projects, five of which involve toll roads and bridges. The most sweeping proposal will first turn certain HOV lanes into high occupancy toll (HOT) lanes. In the second phase, the private corporation will construct more HOT lanes in corridors where state plans call for HOV lanes but where funding constraints have prevented their construction. The third phase involves imposing tolls on all existing (135 miles) freeway lanes. Following the lead of California, Washington has opted to specify a maximum profit rather than to regulate the tolls themselves. The state has appropriated a Transportation Revolving Loan Fund that can be tapped for these projects. At least three of the projects anticipate state contributions of already scheduled expenditures for rights-of-way or environmental analyses. Private developers may also seek state commitments not to build facilities that would compete with the new roads.

However, the projects have been derailed by legislation that places a two-year moratorium on any new public-private projects and subjects projects already under negotiation to increased legislative scrutiny and local approval.

South Carolina

The state DOT commissioners have voted to open negotiations with a consortium to finance, design, build, and operate a 17.5 mile stretch of four-lane toll highway connecting I-385 and to I-85 in Greenville County. The Southern Connector will be built using private money and operated by a nonprofit corporation. The plan calls for a \$20 million loan from the state to be repaid with interest in 12 years. The group will deed the road to the state when construction is completed. Motorists will pay \$1.50 or less in tolls to trim 20 minutes off their commute.

Minnesota

Minnesota DOT is inviting developers to propose build-operate-transfer highway projects. They have been developing a private sector program since the state passed enabling legislation in 1993 in an effort to encourage investors to build some of its unfunded transportation projects. MinnDOT will seek local community cooperation before the state negotiates contracts. MinnDOT is giving private investors latitude in setting toll fees and lengths of operating contracts.

FINDING E2

Commonwealth Purchasing Procedures, Which PennDOT Must Follow, Result in Delays and Added Costs but Improvements Are Being Made

Summary: PennDOT's ability to purchase materials and routine services is hampered by complex purchasing procedures that require multiple layers of review and approval, resulting in delays and added costs. While these procedures apply to all executive branch agencies, PennDOT is one of the most heavily affected departments because of its large volume of purchases. PennDOT, the Department of General Services, and the Office of the Budget are considering, and in some cases have initiated, reforms to make the procurement process more efficient.

Delays and added costs resulting from inefficient procurement policies was the foremost problem reported on a questionnaire we sent to county maintenance managers during the summer of 1995. Of the 38 county managers who responded to this survey, 26 (68 percent) disagreed or strongly disagreed with the statement that "PennDOT policies and procedures used to procure materials and services result in the Commonwealth receiving fair value for the money spent." Comments received from county managers and employees include:

- The procurement process is too lengthy and is more concerned with low cost than with quality. Subsequently, we get equipment and materials that are often ineffective and in many cases only usable for short periods before needing replacement.
- The current procedures are time consuming and usually result in late services at an inflated price.
- Purchasing takes way too much time with too many approval sign-offs. Dollar amounts at county level are far too low.
- The \$1,500 limit on DPA purchases by counties needs to be increased for efficiency. Local contracts for items such as sweeping vacuums and brush cutters would produce more bang for the dollar. Statewide contracts are not efficient and, depending on location, useless for some.
- The garage where I work doesn't obtain needed equipment speedily. Floor jacks have been needed for over six months. One was brought in and it

wasn't very good When equipment breaks, it takes forever to get it repaired.

- EDP equipment and software procurement are a major hurdle. It affects our production capacity.

These criticisms were confirmed during our visits to the engineering and maintenance district offices, with the general comments that the approval process takes too long, the limits on what can be purchased locally are too low, and that often smaller items (e.g., cameras, vehicle parts, and EDP software) could be purchased faster and cheaper locally. Although office supplies, other than those available from the DGS warehouse, can now be purchased locally, several of the field officials we interviewed said that the process is so ponderous that it discourages their participation. Other difficulties cited include blacktop contracts not executed on time, minimum order requirements from the central warehouse, the length of time required to execute emergency contracts, and the requirement that equipment repair parts must be bought from the original equipment manufacturer who may not have the cheapest price. One district engineer stated that the problem is the “one size fits all” orientation of the Department’s central offices, the Department of General Services, and the Comptroller’s Office. Several district and county managers noted, however, that recent changes, particularly the increase in the local bid/central award purchase requisition limit from \$5,000 to \$10,000, have helped.

Officials we interviewed, both within PennDOT and externally, commented that delays occur because of the numerous approvals required, incomplete and incorrect data, and the lack of supporting documentation. We were told that delays also typically occur within the Office of General Counsel at the beginning of each new Administration when that Office, for a finite period of time, reviews all service contracts. We also found that DGS does not always have key contracts used by PennDOT in place by the anticipated effective date. This can result in field personnel having to use alternative, and more cumbersome, purchasing procedures.

Current Procurement Procedures

We reviewed the procedures PennDOT must follow when procuring material and services. As shown below, the procedures are complex (even when explained in a summary manner) and require multiple reviews and approvals.

Materials Procurement

PennDOT procures most of its materials in one of four general ways: through noncontract commodity purchases (which includes direct purchase authorizations, local bid/local award, local bid/central award, and purchase requisitions), DGS contract commodity purchases, ordering from central warehouses (PennDOT

Equipment Division, PennDOT Sign Shop, PennDOT Bureau of Office Services warehouse, and the DGS warehouse), and confirmation emergency purchases.¹ These procedures are described below.

Direct Purchase Authorizations (DPAs). These are used for the non-competitive purchase of certain commodities under \$1,500 (e.g., from the local K-Mart). Vehicle repair parts if they are needed immediately, EDP equipment or software, and telecommunications equipment may be purchased by DPA if items are not available through DGS statewide contract, the DGS warehouse, or one of PennDOT's warehouses. DPAs for field organizations may be approved by authorized engineering and maintenance district personnel. Payments may be made through the initiating office's cash advancement account, which is subject to comptroller post-audit.

Local Bid/Local Award. This applies to competitive bidding for commodities between \$1,500 and \$3,000 that are not on DGS contract. At least two telephone quotes are required. Approval is required of the county maintenance district; the engineering district; and, within BOS, the transportation purchasing officer and an MSMD manager. Sole source purchases are not permitted and local bid/local awards are audited by the Comptroller.

Local Bid/Central Award. This applies to purchases between \$3,000 and \$10,000. (Prior to January 1996 the limit was \$5,000.) Three written bids are required. All post-bid requirements that apply to the local bid/local award procedure also apply to local bid/central award.

Purchase Requisitions. This applies to commodity purchases of more than \$10,000 and for sole source commodity purchases over \$1,500. PennDOT employees prepare the request, but it is processed through DGS. In addition to the required DGS approvals, purchase requisitions also require review and approval by BOS and the Comptroller's Office. Within BOS, non-capital expenditures less than \$25,000 need the transportation purchasing officer's (TPO) signature; those over \$25,000 also require an MSMD manager's signature. Capital expenditures up to \$25,000 need an MSMD manager signature; those over \$25,000 also require the Deputy Secretary for Administration's approval (with the exception of equipment which is approved by the Director of Bureau of Maintenance and Operations and then BOS).

PennDOT's current average processing time goal for purchase requisitions is 105 calendar days, measured from the date the requisition was initiated by the PennDOT employee until DGS mailed the approved purchase order to the vendor.

¹Other procedures apply for four other types of procurements: communications equipment, including computer hardware and software, purchased by PennDOT's Bureau of Information Systems; office equipment leases; and automotive equipment rentals.

The Department, at 106 calendar days, only narrowly failed to meet the goal in FY 1994-95.

DGS Statewide Commodity Contracts. Only local approving authority is needed if the DGS commodity is on PennDOT's computerized Maintenance Operations Resource Information System (MORIS). Manual orders (not contracts) from statewide commodity contracts under \$1,500 must be reviewed and signed by the initiating engineering or maintenance district or central office bureau. Contracts over \$1,500 must also be reviewed and signed by BOS MSMD and audited and signed by the Comptroller. Commodities on the DGS statewide commodity contract include high-use items such as salt, tires, paint, and pipe.

The Department attempts to secure 91 percent of the 50 key DGS commodity contracts of greater interest to PennDOT (46 of the 50) by the scheduled contract effective date. This goal, largely not within PennDOT's control, has not been met during any of the last five fiscal years. Only 78 percent of the contracts (39 of the 50) were secured by the scheduled date in FY 1994-95. This is an improvement over most prior years.

Confirmation Emergency Purchases. This applies to the emergency purchase of commodities over \$10,000 not on statewide contract. Such purchases must be approved by the district engineer, BOS, and the DGS Bureau of Purchases.

Ordering of Commodities From Central Warehouses. Prior to January 1996, the DGS warehouse required a minimum order quantity of \$50. There is no minimum order quantity on orders from the PennDOT warehouse. MORIS generated orders may be approved locally for field organizations.

Services Procurement

PennDOT procures services through service purchase contracts, highway and bridge contracts, consultant engineering agreements, purchase order contracts, right-of-way contracts, contracts and agreements for the maintenance and repair of office equipment and engineering instruments, and certain federally funded contracts and agreements.

Only those routine services used by PennDOT on a recurring basis are within the purview of this finding. These services are procured by Direct Purchase Authorization or by Service Purchase Contract (SPC). In an emergency situation, these services are procured using an Emergency Purchase of Service Contract.

These routine services include, but are not limited to, appraisal and consulting services of a routine nature, conferences and training (meals, meeting room rentals, lodging), electrical services, exterminating services, herbicide application,

janitorial services, HVAC (heating, ventilating, and air conditioning) services, highway sign lighting and maintenance, landfill services, medical and related exams, photographic services, plumbing services, refuse pickup, roadside rest maintenance, seeding/mulching/mowing, septic tank and privy vault cleaning, treated mop and mat services, tree trimming and removal, and wastewater tests.

Direct Purchase Authorizations (DPAs). These are used for the noncompetitive purchase of services not exceeding \$300. They are executed locally and require only the contractor and agency head or designee signatures. DPAs cannot be used to purchase EDP consulting or telecommunications services.

Service Purchase Contracts (SPCs). These are used to purchase routine services over \$300 as follows:

Services over \$300 but less than \$1,500 may be purchased, competitively or noncompetitively at the option of the Department, using an SPC. Noncompetitive SPCs within this price range and on an approved services list require only the signature of the contractor and the field purchasing authority. Noncompetitive SPCs within this price range but not on the approved services list require the signatures of the contractor, the field purchasing authority, the BOS, the Comptroller, and the Secretary of the Budget or designee. Competitively bid SPCs within this price range and on the approved services list, if a one-time single payment, need only be approved up to the initiating district engineer or bureau director level. Competitively bid SPCs within this price range but not on the approved services list, as well as multiple payment SPCs, require BOS approval.

SPCs between \$1,500 and \$5,000 may be bid by phone (three telephone bids) and confirmed in writing. The procedures are the same as above, but BOS approval is required for all contracts.

SPCs over \$5,000 are initiated by engineering districts or central office units and require written bids. These contracts are for the competitive purchase of routine services and must be submitted through the district engineer or bureau director to the Bureau of Office Services for approval. Those less than \$25,000 require a BOS transportation purchasing officer (TPO) signature; those up to \$50,000 also require an MSMD manager signature; those up to \$100,000 additionally require the MSMD chief signature; and those over \$100,000 require the BOS director's signature.

External (non-PennDOT) approval is required for SPCs of \$1,500 to \$100,000. The Chief Counsel, Attorney General, and Comptroller must sign. General Counsel signatures are only required on SPCs over \$100,000 or those with five-year terms. Most SPCs do not go to the General Counsel because Chief Counsel has

received delegation authority from them. The Attorney General reviews all SPCs not on the pre-approved services list that go through the Chief Counsel's office.

PennDOT's current average processing time goal for SPCs is 30 calendar days. PennDOT met this goal in FY 1994-95 averaging 27.1 calendar days.

Emergency Purchase of Service Contracts. Those greater than \$1,500 must be authorized by the district engineer (or BOS for bureaus). Deputy Secretary for Administration and Comptroller review and approval is also needed.

PA IMPACCT Commission

The Pennsylvania IMPACCT Commission, which reviewed Commonwealth purchasing practices applicable to all state agencies, found that purchasing problems exist throughout state government. In particular, the IMPACCT Commission found:

- The economies associated with statewide DGS commodity contracts have never been objectively evaluated to determine ongoing effectiveness.
- The number of bidders is low because of the red tape that clogs the process, payment schedules, embedded contractual requirements, and lack of information or access to opportunities.
- The cost of central warehousing through DGS sometimes eliminates the savings generated by buying on a contract.
- The Commonwealth is paying higher costs due to proprietary systems applications and architecture.
- Very little is known about the effectiveness of the current approach to buying services in Pennsylvania State Government.

The Commission made eight broad recommendations addressing the need to reduce the time and cost involved in purchasing both goods and services. The Commission also noted that state employees frequently believe that the cost of items on DGS statewide contract is high. The Commission recommended that a study be done to assess the cost effectiveness of these contracts.

As noted above, we also cite several examples of items that PennDOT staff believe could be purchased less expensively than through the DGS statewide contract. However, even if PennDOT could purchase tires or personal computers for less than the DGS contract price, other departments and agencies may not be able to purchase these items in sufficient quantities to obtain the same discounts. For

them, the DGS contract price might be best. However, if PennDOT did not make such purchases using the DGS contract, the DGS contract price could well rise for all other agencies because vendors could not, in many if not most situations, offer the same quantity discounts.

Recent Initiatives

In January 1996 the purchase requisition limit was raised from \$5,000 to \$10,000 and the \$50 minimum order requirement for central warehouse items was eliminated.

PennDOT executive office and purchasing officials also report that their relationship with DGS has improved and that the annual backlog of tardy DGS contracts is decreasing. The Bureau of Office Services is leading a contract review team which is reviewing appropriate signature authority levels. Also, in late 1995 the MSMD Chief began sending monthly summaries to field personnel on the status of their DGS materials contracts.

The Deputy Secretary for Administration noted that PennDOT had problems getting materials contracts, often for low dollar amounts, out of the Office of General Counsel. In early 1996 the DGS Chief Counsel received delegation authority from the General Counsel to review and sign materials contracts up to \$1 million. This should alleviate some of these problems. The Secretary of Transportation, the deputy secretaries, the comptroller, and the chief counsel are also reviewing the inefficiencies in materials procurement and plan to make recommendations for improvements. The group intends to complete their findings by June 1996 and begin implementing improvements in July 1996.

A competitively bid service purchase contract which results in only one response can now be approved at the local level (but will eventually be reviewed by BOS). PennDOT officials believe that Office of the Budget modifications to Management Directive 215.15 on statewide contracting for services will result in further efficiencies. The Bureau of Office Services, in January 1996, also established a clearinghouse function for any service contracts solicited using requests for proposals.

Recommendations

- 1. PennDOT should continue efforts to reduce the turnaround time for processing material and service purchases by reducing the number of signatures required where appropriate, by developing on-line communication with vendors, and by electronically sending bid notices to the *Pennsylvania Bulletin*.**

- 2. PennDOT and the Department of General Services should establish reasonable procedures allowing PennDOT field offices to use Direct Purchase Authorizations for items that are on a DGS statewide contract or that must currently be obtained through PennDOT or DGS central warehouses (e.g., the item must be of similar or better quality and cost at least ten percent less than what the item could be purchased for through normal state channels). Such procedures should, however, be viewed within the context of all of state government so that savings realized by PennDOT do not result in significant additional costs to other state agencies.**

- 3. The Department of General Services and the Office of the Budget, together with large agencies such as the Department of Transportation, should work toward implementing the recommendations of the IMPACCT Commission to streamline and simplify Commonwealth procedures for purchasing goods and services.**

FINDING E3

PennDOT Is Updating Its Performance Measures to Place Greater Emphasis on Efficiency and Outcomes

Summary: Many of PennDOT's current performance measures were developed in the early 1980s and most measure inputs or outputs. (Efficiency and outcome measures are generally recognized as being more useful for decision-making and for accountability.) We found only limited satisfaction within PennDOT with the current measures. PennDOT management recognizes the need to update its performance measurement systems and is developing additional efficiency and outcome measures, including an Organizational Performance Index, a Customer Service Index, and improved highway maintenance evaluation measures.

Many of PennDOT's current performance measurement systems were developed in the early 1980s. The Department has at least 758 such measures providing information on various PennDOT programs, activities, and functions.

The hierarchy of performance measures recommended by the Governmental Accounting Standards Board (input, output, efficiency, and outcome measures) is presented in Exhibit 35.

Exhibit 35

Types of Performance Measures

Input indicators describe the resources (money, labor, materials, equipment, supplies) needed to provide a particular product or service.

Output indicators describe the products or services provided by a program and focuses on the level of activity.

Efficiency indicators describe the cost (whether in dollars or employee hours) per unit of output or outcome.

Outcome indicators attempt to describe the results of a program or service, ideally against the program's objectives and goals.

Source: Compiled from Governmental Accounting Standards Board, *Service Efforts and Accomplishments Reporting: Its Time Has Come*.

Most PennDOT Performance Measures Focus on Inputs and Outputs

PennDOT's current performance measures are distributed among many internal reporting systems:

- County Accreditation Review System (CARS)
- Department Management Summary Report (Blue Book)
- Program Measures: Highway Administration Central Office (Yellow Book)
- District Management Summary Report (Green Book)
- County Management Summary Report (Red Book)
- Maintenance Operations Resource Information System (MORIS)
- Quality Assurance Evaluations
- Roadway Management System
- Systematic Technique to Analyze and Manage Pennsylvania
- Pavements (STAMPP)
- County Award Program

We counted at least 758 different measures distributed among these internal reporting systems. Of these 758 measures, we classified 139 (18 percent) as input measures; 512 (68 percent) as output measures; 11 (2 percent) as efficiency measures; and 96 (13 percent) as outcome measures. The majority of the Department's performance measures are therefore either input or output measures. While such measures have value, measures that focus on efficiency and outcomes are generally more useful for assessing accountability and results.

We also categorized the 758 measures by their focus. We found that PennDOT has 64 personnel measures; 28 training measures; 124 financial measures; 28 equipment and materials measures; and 514 measures that focus on operational activities. We also found that 238 of the 758 measures (31 percent) concerned internal PennDOT operations and 520 (67 percent) dealt with services provided to external parties such as contractors or the general public.

Over half of the PennDOT managers we interviewed or surveyed (deputy secretaries, district engineers, county maintenance managers, bureau directors, and division chiefs) believed that the Department's current performance measurement systems did not adequately gauge their unit's performance. Several of the managers interviewed indicated that the measures are not really meaningful and that they fail to address outcomes or quality of service. A few of the managers acknowledged that performance measures played little role in their decision-making process.

PennDOT Is Updating Its Performance Measurement Systems

Although PennDOT has been a national leader in the extent and sophistication of its performance measurement effort, it recognizes the need to update and refine its performance measurement systems to be more responsive to current needs. Toward this end, the Department is developing additional efficiency and outcome measures, designing and implementing a Customer Service Index and/or an annual Customer Complaint Survey, and formulating improved highway maintenance evaluation measures. Departmental officials are planning on streamlining their current measures and consolidating some of those lower priority measures not dropped into a Quarterly Statistical Digest.

This effort is underway in each deputate. For example, the Safety Administration deputate has a Performance Measurement Quality Control Task Force that is conducting an in-depth review of all safety administration measures. Those measures which are no longer meaningful will be dropped. The focus of the measures retained or added will shift to addressing efficiency and outcomes.

Another example of emerging outcome measures is the pilot testing of an Organizational Performance Index (OPI)¹ that focuses on quality and timeliness of service. Each measure is scored and weighted to arrive at a total index value. Index scores will be recorded over time and will provide managers with trend information on the quality and timeliness of the services they provide. The OPI was initiated in PennDOT's Bureau of Office Services in the Administration deputate, and pilot programs are now underway in several other PennDOT bureaus.

A Customer Service Index (CSI) is also being developed that will assign a relative importance to various customer-related operations. The scores of the individual operations will then be combined to yield a summary score. A customer perception survey was administered in 11 pilot counties during FY 1994-95 and statewide in all 67 counties in FY 1995-96. The results of the survey are being used to construct the CSI, which will then be computed on a regular basis and tracked over time.

PennDOT has also initiated a project to improve its ability to evaluate county highway maintenance districts. The Department has contracted with the Magellan Group, a consulting firm, to identify "best practices" and opportunities to improve the efficiency of maintenance operations at the county level. The Magellan Group will provide a macro evaluation of all activities performed by the counties and seven micro evaluations. These evaluations will focus on the relationship of inputs (such as personnel, equipment, material, budget, and weather) to results (such as road

¹This Organizational Performance Index (OPI) should not be confused with the Overall Pavement Index (OPI) which is used to measure pavement quality.

rideability and winter services). Using this information, an efficiency rating will be developed for each county.

Recommendation

- 1. The Department should continue its efforts to improve its performance measurement system by:**
 - **streamlining the number of measures,**
 - **focusing on outcomes and efficiency,**
 - **better integrating the measures with management's decision-making processes,**
 - **continuing its initiative to develop an Organizational Performance Index, a Customer Service Index, and improved measures of the efficiency of county maintenance operations, and**
 - **creating an understandable and accessible format for the dissemination of the measures to the general public.**

FINDING E4

ISTEA Legislation Established a Rational Planning Process, but Congressionally Earmarked Projects Interfere With State and Local Priorities

Summary: Federal legislation passed in 1991, known as ISTEA, gave greater transportation planning and decision-making authority to state and local governments. Pennsylvania's ISTEA planning process provides regional and local planning organizations a full opportunity to initiate and participate in transportation projects affecting their areas. Congress, however, often earmarks federal funds for specific projects. Fully \$1.32 billion of the \$1.57 billion in planned major highway construction funding expected to be available from FFY 1997 through FFY 2000 is targeted to such earmarked system expansion projects. Rather than turn down such projects and risk losing federal funds, PennDOT and the local planning organizations accept the earmarked projects. As a result, higher priority projects may be left unfunded.

The federal Intermodal Surface Transportation Efficiency Act of 1991, known as ISTEA, significantly changed transportation planning in Pennsylvania and throughout the nation. In particular, the ISTEA legislation requires that metropolitan area regional transportation planning commissions, known as Metropolitan Planning Organizations (MPOs), develop a Transportation Improvement Program (TIP) for their area. The regional TIPs, which must be approved by PennDOT, are then incorporated into the Statewide Transportation Improvement Program (STIP). The STIP is the official mechanism by which transportation projects are selected for federal funding. Only projects that are on the STIP can receive federal highway or transit funds.

The ISTEA planning process therefore requires mutual cooperation between the metropolitan planning organizations and PennDOT. If the planning organization and PennDOT cannot agree on the priorities in that metropolitan area, the regional TIP cannot be approved and no federal highway or transit funds can be used for projects in that area until agreement or compromise is reached.

How Projects Are Approved for Funding

Pennsylvania's 26 transportation planning commissions consist of 14 metropolitan planning organizations (MPOs); 7 Local Development Districts (LDDs) that cover most rural areas of the state; and five counties that are neither in an MPO

nor an LDD.¹ Although ISTEA requires that only metropolitan areas be involved in transportation planning, PennDOT has agreed to include the LDDs and the five counties that are not affiliated with either an MPO or an LDD as full partners in the project selection process for their areas. MPO membership is typically comprised of local elected officials, county planners, officials of agencies which administer or operate major modes of transportation in the metropolitan area, other local or regional officials, and appropriate state and federal officials. For example, the Southwestern Pennsylvania Regional Planning Commission includes representation from the Federal Highway Administration, the Federal Transit Administration, the U.S. Environmental Protection Agency, the U.S. Department of Housing and Urban Development, the Pennsylvania Department of Transportation, the Pennsylvania Department of Community Affairs, the Pennsylvania Department of Environmental Protection, the Governor's Office, officials from the six-member counties and member city, the port authority, and one other local transit operator.

Under ISTEA, the transportation planning commissions develop a TIP that includes a prioritized program of transportation projects over a four-year period. The program is to be based on regional needs and may include highway and transit projects. The TIP is to include a financial plan that demonstrates how the TIP can be implemented, identifies public and private sources that are reasonably available to carry out the plan, and provides recommendations for innovative financing techniques. PennDOT works closely with the transportation planning commissions during the preparation of their TIPs.

PennDOT's Center for Program Development and Management then consolidates the projects listed on the respective TIPs into a recommended four-year STIP. ISTEA requires that the STIP only include projects or an identified phase of a project for which full funding can reasonably be expected to be available within the time period contemplated for completion of the project. Therefore, all projects on the regional TIPs are not included on the draft STIP. The STIP must be consistent with the long-range intermodal transportation plan for the state, the MPO TIPs, and the state implementation plan developed pursuant to the Clean Air Act for ozone and carbon monoxide mitigation. The recommended STIP is provided to both the State Transportation Commission as part of the Twelve Year Program and to the regional planning organizations. The State Transportation Commission then holds hearings across the state to receive comments and input on the program.

During this review period, the regional planning commissions can suggest changes to the STIP for their areas. For example, in February 1996 when PennDOT released the proposed 1997-2000 STIP for highways and bridges, it noted that there was some flexibility to substitute projects of similar costs and types of funding. However, the Department stipulated that the total dollar amount for

¹Transportation planning is a primary, and in many cases the highest, priority of MPOs and LDDs. They also have other responsibilities. Areawide economic development is typically their other top priority.

projects in any region could not exceed the total amount in that region's proposed program. (Proposed 1997-2000 STIP funding by county is shown in Table 38, along with the FY 1994-95 construction rebudget.)

The State Transportation Commission can also recommend changes to the proposed STIP. However, if the changes involve a metropolitan area, they must be agreed to by the MPO for that area. Because the ISTEA legislation only requires TIPs from MPOs, theoretically changes could be made to projects in the state's other areas without the concurrence of the transportation planning commissions in those areas. PennDOT, however, has indicated it intends to treat all the transportation planning commissions (MPOs, LDDs, and the five counties) equally.

Once the TIPs are approved by the transportation planning commissions, the Secretary of Transportation, and the State Transportation Commission, they are to be incorporated into the STIP. If agreement cannot be reached on all significant issues, PennDOT will withhold a region's TIP until such time as compromise can be reached and differences are resolved. The FFY 1997-FFY 2000 STIP must be approved by the Federal Highway Administration (FHWA) by October 1, 1996.

Merging ISTEA With the Requirements of Act 1970-120

Beginning with the FFY 1997-FFY 2000 STIP, PennDOT has begun to merge the requirements of ISTEA with the requirements of Act 1970-120, which established the State Transportation Commission and the Twelve Year Transportation Program. Act 120, as amended, requires PennDOT to develop and submit to the State Transportation Commission a program of transportation projects to be undertaken during the next twelve fiscal years. The Twelve Year Program is organized into three four-year segments, with the first four-year segment representing the Commonwealth's top transportation priorities.

Pennsylvania's planning processes for both ISTEA and Act 120 are organized around four-year planning horizons that are updated every two years, but the two plans are on different cycles. To address this problem, the Department plans to develop the 1997-2008 Twelve Year Transportation Program and the FFY 1997-FFY 2000 TIP and STIP so that all projects are consistent. The first four years of the state Twelve Year Program will correspond to the STIP requirement under ISTEA. Merging the two processes will result in some changes to the traditional Twelve Year Program.

Three major changes have occurred as a result of ISTEA. One major change is that under ISTEA, the STIP can only include projects for which funding can reasonably be anticipated to be available within the time period contemplated for project completion. Act 120 has no such requirement. In part because of the "reasonably anticipated funding" requirement, the Pennsylvania Secretary of Transportation proposed a program limited to \$4.8 billion during the first four

years (1997-2000) of the Twelve-Year Program.² This is about \$2.2 billion less in projects than called for during the first four-year phase of the current Twelve Year Program.

PennDOT arrived at the \$4.8 billion “cap” by assuming that the total highway and bridge funding available will remain at approximately the FFY 1997 level (\$1.2 billion per year). PennDOT cautions that assumptions on federal funding will be subject to modification once the new federal surface transportation act, which is due for reauthorization in 1997, is passed.

Secondly, ISTEA requires that the projects on the TIPs and STIP be prioritized by year. This is not required by Act 120, and the Twelve Year Program is not prioritized within any of the four-year periods. Prioritizing projects by year should improve the predictability of project completion. However, the ultimate decision as to which construction projects will be funded rests with the General Assembly through passage of the Capital Budget. If the General Assembly does not authorize a project in the Capital Budget then the project will not proceed, regardless of its priority on the STIP.

A third major change involves the role of the State Transportation Commission. Act 120 is unclear as to whether the State Transportation Commission is an advisory body that recommends a Twelve-Year Transportation Program to the Secretary of Transportation or whether PennDOT is mandated to follow the program once it is approved by the State Transportation Commission.³ Under the new concurrent development process, there should be less ambiguity because the first four years of the Twelve Year Program will be identical to the STIP submitted to the federal government. Projects will be listed in priority order. Amendments (i.e., additions or deletions of projects) to the STIP, at least for the metropolitan areas,

²There were also other compelling factors. The highly structured participation of the MPOs and the LDDs in this process resulted in far more projects entering the pipeline than previously. Additionally, significant funding limitations, some of which are discussed elsewhere in this finding, compelled the Governor to attempt to limit initiating transportation planning commission project proposals to more realistic expectations.

³Whether PennDOT is required to follow decisions made by the State Transportation Commission was the subject of a 1979 legal opinion by PennDOT's Chief Counsel and at least one legislative hearing. According to Act 120, the Commission is to recommend an order of priority for transportation projects which is to be provided to the Governor, the General Assembly, and the Secretary of Transportation for their consideration. The act also states that the transportation programs so determined shall not be changed, deleted, or altered except by the Commission. We reviewed the Department's 1979 legal opinion and testimony taken at the 1988 legislative hearing, but neither appeared to resolve the apparent discrepancy. At the 1988 legislative hearing, the then Secretary of Transportation read from the 1979 legal opinion that “once highway or other transportation projects are itemized in an enacted Capital Budget Act and funds are made available by the General Assembly, the Department is authorized to implement in any order the capital projects therein itemized, regardless of the priority status assigned by the State Transportation Commission. Even a project which has not been programmed by the Commission may be implemented by the Department if the General Assembly authorizes the projects by listing them in a Capital Budget In my opinion any conclusion contrary to that set forth herein would lead to the absurd conclusion that the State Transportation Commission would have veto power over the General Assembly.”

can only be made with the concurrence of the affected MPOs. As a consequence, PennDOT and the affected MPO will need to go through a formal and public involvement process to add or delete projects during the first four years of the Twelve Year Program. Regulations do, however, permit projects to move from one year to another year within the STIP without going through the amendment process. These modification actions are referred to in the regulations as “project selection actions.”

Congressionally Earmarked Projects Directly Affect Commonwealth Priorities

Although the planning process established under ISTEA appears sound, the process can be undermined when Congress targets specific highway projects for federal funding. The local planning organizations and the Department are then put in the position of either giving the project a high priority on their transportation plans, which means that the monies are not available for other potentially more worthy projects, or rejecting the project. If the project is rejected, the earmarked monies are, in essence, placed in escrow until either the project is accepted or the money is reallocated from the Highway Trust Fund to another project, possibly in another state.

The practice of Congress earmarking funds for specific purposes can significantly impact the Commonwealth’s ability to fund the projects of greatest need. For example, approximately 27.5 percent (\$1.32 billion of \$4.8 billion) of the total funding projected to be available for the highway and bridge component of the 1997-2000 Statewide Transportation Improvement Program is for specific projects earmarked by Congress. When only the funding available for major highway construction projects is considered, the percentage applied to earmarked projects rises to 84 percent (\$1.32 billion of \$1.57 billion). Most (70 percent) of this \$1.32 billion is for projects in central Pennsylvania. Rather than turn down these projects and risk losing the associated federal funding, the Department accepts the earmarked projects. The earmarking by Congress of funding for specific major construction projects therefore severely limits the ability of the Department and the State Transportation Commission to allocate funds to other projects that may be of higher priority.

Table 38

**Actual and Proposed Highway Construction Spending,
by County**
(\$000)

| | FY 1994-95 ^a | | Proposed STIP ^b | | County Population | |
|------------------|------------------------------|-------------------|----------------------------|-------------------|-------------------|-------------------|
| | <u>Construction Rebudget</u> | | <u>FFY 1997 - FFY 2000</u> | | | |
| | <u>Amount</u> | <u>% of Total</u> | <u>Total</u> | <u>% of Total</u> | <u>Total</u> | <u>% of Total</u> |
| Adams | \$ 2,467 | 0.2% | \$ 9,168 | 0.2% | 75,331 | 0.6% |
| Allegheny | 57,408 | 5.3 | 438,861 | 10.1 | 1,334,285 | 11.0 |
| Armstrong..... | 3,799 | 0.4 | 40,285 | 0.9 | 85,211 | 0.7 |
| Beaver | 6,323 | 0.6 | 70,149 | 1.6 | 186,983 | 1.5 |
| Bedford..... | 3,673 | 0.3 | 73,009 | 1.7 | 50,372 | 0.4 |
| Berks | 54,832 | 5.1 | 87,169 | 2.0 | 338,444 | 2.8 |
| Blair | 8,515 | 0.8 | 35,313 | 0.8 | 130,130 | 1.1 |
| Bradford..... | 13,483 | 1.2 | 34,547 | 0.8 | 66,814 | 0.6 |
| Bucks..... | 25,943 | 2.4 | 87,133 | 2.0 | 576,716 | 4.8 |
| Butler | 15,131 | 1.4 | 27,264 | 0.6 | 165,238 | 1.4 |
| Cambria | 15,444 | 1.4 | 56,165 | 1.3 | 161,255 | 1.3 |
| Cameron..... | 4,093 | 0.4 | 8,300 | 0.2 | 6,175 | 0.1 |
| Carbon..... | 431 | 0.0 | 8,503 | 0.2 | 53,835 | 0.4 |
| Centre | 5,726 | 0.5 | 537,518 | 12.3 | 122,919 | 1.0 |
| Chester..... | 55,019 | 5.1 | 123,356 | 2.8 | 379,733 | 3.1 |
| Clarion | 1,158 | 0.1 | 38,350 | 0.9 | 48,116 | 0.4 |
| Clearfield | 2,138 | 0.2 | 24,695 | 0.6 | 90,630 | 0.7 |
| Clinton | 24,976 | 2.3 | 12,655 | 0.3 | 41,381 | 0.3 |
| Columbia..... | 1,602 | 0.1 | 13,283 | 0.3 | 63,644 | 0.5 |
| Crawford | 2,766 | 0.3 | 13,767 | 0.3 | 91,025 | 0.8 |
| Cumberland | 36,259 | 3.3 | 25,177 | 0.6 | 202,755 | 1.7 |
| Dauphin | 30,868 | 2.8 | 165,955 | 3.8 | 244,112 | 2.0 |
| Delaware | 17,012 | 1.6 | 81,110 | 1.9 | 541,442 | 4.5 |
| Elk | 4,170 | 0.4 | 25,325 | 0.6 | 38,243 | 0.3 |
| Erie..... | 47,560 | 4.4 | 103,146 | 2.4 | 289,552 | 2.4 |
| Fayette | 4,274 | 0.4 | 32,985 | 0.8 | 158,626 | 1.3 |
| Forest | 841 | 0.1 | 4,981 | 0.1 | 5,083 | 0.0 |
| Franklin..... | 4,305 | 0.4 | 20,886 | 0.5 | 121,730 | 1.0 |
| Fulton..... | 525 | 0.0 | 5,933 | 0.1 | 14,869 | 0.1 |
| Greene..... | 15,008 | 1.4 | 27,031 | 0.6 | 43,863 | 0.4 |
| Huntingdon..... | 1,963 | 0.2 | 53,644 | 1.2 | 45,262 | 0.4 |
| Indiana..... | 6,211 | 0.6 | 22,478 | 0.5 | 100,658 | 0.8 |
| Jefferson..... | 7,107 | 0.7 | 7,883 | 0.2 | 51,427 | 0.4 |
| Juniata..... | 667 | 0.1 | 0 | 0.0 | 20,995 | 0.2 |
| Lackawanna..... | 196,098 | 18.1 | 36,458 | 0.8 | 217,299 | 1.8 |
| Lancaster | 16,463 | 1.5 | 31,876 | 0.7 | 437,948 | 3.6 |
| Lawrence..... | 9,576 | 0.9 | 29,157 | 0.7 | 103,310 | 0.9 |
| Lebanon | 883 | 0.1 | 27,347 | 0.6 | 118,151 | 1.0 |

Table 38 (Continued)

| | <u>Amount</u> | <u>% of Total</u> | <u>Tot</u> | <u>% of Total</u> | <u>Total</u> | <u>% of Total</u> |
|---------------------|---------------|-------------------|---------------|-------------------|----------------|-------------------|
| Lehigh | \$ 10,062 | 0.9% | \$ 87,006 | 2.0% | 291,083 | 2.4% |
| Luzerne | 6,725 | 0.6 | 83,657 | 1.9 | 316,577 | 2.6 |
| Lycoming..... | 12,412 | 1.1 | 44,869 | 1.0 | 109,908 | 0.9 |
| McKean | 3,423 | 0.3 | 14,923 | 0.3 | 46,431 | 0.4 |
| Mercer | 20,098 | 1.9 | 48,881 | 1.1 | 123,134 | 1.0 |
| Mifflin..... | 550 | 0.1 | 155,050 | 3.6 | 45,190 | 0.4 |
| Monroe | 1,367 | 0.1 | 30,597 | 0.7 | 104,133 | 0.9 |
| Montgomery..... | 8,683 | 0.8 | 292,093 | 6.7 | 692,521 | 5.7 |
| Montour | 11,171 | 1.0 | 48,932 | 1.1 | 17,814 | 0.1 |
| Northampton | 9,251 | 0.9 | 131,594 | 3.0 | 244,668 | 2.0 |
| Northumberland..... | 13,153 | 1.2 | 6,683 | 0.2 | 99,491 | 0.8 |
| Perry..... | 26,659 | 2.5 | 50,415 | 1.2 | 43,717 | 0.4 |
| Philadelphia..... | 63,295 | 5.8 | 350,296 | 8.0 | 1,559,462 | 12.9 |
| Pike | 9,412 | 0.9 | 14,036 | 0.3 | 29,168 | 0.2 |
| Potter..... | 2,702 | 0.2 | 4,835 | 0.1 | 20,817 | 0.2 |
| Schuylkill..... | 10,590 | 1.0 | 39,224 | 0.9 | 147,191 | 1.2 |
| Snyder | 986 | 0.1 | 2,775 | 0.1 | 41,678 | 0.3 |
| Somerset | 2,966 | 0.3 | 25,432 | 0.6 | 85,291 | 0.7 |
| Sullivan..... | 1,394 | 0.1 | 3,249 | 0.1 | 5,739 | 0.0 |
| Susquehanna | 5,203 | 0.5 | 11,032 | 0.3 | 42,639 | 0.4 |
| Tioga..... | 14,163 | 1.3 | 75,138 | 1.7 | 41,001 | 0.3 |
| Union..... | 192 | 0.0 | 5,495 | 0.1 | 36,043 | 0.3 |
| Venango | 7,888 | 0.7 | 18,327 | 0.4 | 62,896 | 0.5 |
| Warren | 1,511 | 0.1 | 8,170 | 0.2 | 46,771 | 0.4 |
| Washington..... | 42,290 | 3.9 | 97,664 | 2.2 | 216,921 | 1.8 |
| Wayne | 3,212 | 0.3 | 17,916 | 0.4 | 45,098 | 0.4 |
| Westmoreland..... | 29,617 | 2.7 | 101,178 | 2.3 | 374,503 | 3.1 |
| Wyoming | 651 | 0.1 | 44,119 | 1.0 | 29,397 | 0.2 |
| York..... | <u>20,009</u> | <u>1.8</u> | <u>67,881</u> | <u>1.6</u> | <u>357,305</u> | <u>3.0</u> |
| Total | \$1,084,952 | 96.3% | \$4,360,259 | 99.0% | 12,100,149 | 100.0% |

^aPennDOT has retained \$40.6 million of the FY 1994-95 Construction Rebudget as unallocated funds. Therefore, the percentage totals for the counties will not equal 100%, and the county dollar totals will not equal the Construction Rebudget total.

^bPennDOT has elected to retain a program reserve of \$467 million for highways for the 1997-2000 STIP period. When added to the proposed STIP figure of \$4.36 billion, the total amount available for highway construction is \$4.83 billion. Engineering Districts 4-0 and 6-0 have retained \$2.2 million \$35.7 million respectively for districtwide projects. Therefore, the percentage totals for the counties will not equal 100%, and the county dollar totals will not equal the Proposed STIP total.

Source: Compiled from data obtained from PennDOT's Bureau of Fiscal Management; the 1997-2000 PennDOT Proposed Statewide Transportation Improvement Program, dated February 8, 1996; and the Pennsylvania State Data Center.

FINDING E5

PennDOT Has Complied With the Requirements of Federal ISTEA Legislation, but the Legislation Has Had Little Impact on Modal Funding Decisions

Summary: The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) imposed 40 requirements on state transportation departments. We found that PennDOT has complied with virtually all of these requirements. ISTEA also gave states significant flexibility in how they use federal funds to meet their transportation needs. However, Pennsylvania, like most states, has “flexed” few funds available for highways to mass transit or other nontraditional projects.

The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was intended to refocus transportation policy toward a seamless national intermodal surface transportation system for the movement of goods and people. ISTEA is based on the premise that a mature transportation system exists in the United States and now emphasis needs to be placed on preservation and operational improvements. In signing the bill, then President Bush cited that the interstate era was coming to an end and that the nation needed to shift from major highway construction to better maintenance, management, and use of the existing highway and transit facilities.

One of the key elements of the ISTEA legislation was the creation of the National Highway System (NHS). The NHS is not a major new construction program, but rather an effort to identify and designate the key highways throughout the country for interstate and regional travel or that are critical links to major ports, airports, and other essential transportation facilities. Once these key highways were identified, the concept was that the federal government would provide the funding required to keep them in good repair.

ISTEA also sought to give state and local government officials greater flexibility in how they could use federal surface transportation funds to meet local needs. ISTEA designated about \$80 billion of the \$155 billion authorized during the six-year period from FFY 1992 through FFY 1997 as “flexible” funds available to finance either highway, mass transit, or other nontraditional projects such as car-pool facilities, high occupancy vehicle lanes, park-and-ride lots, and busways. The intent was for the federal government to step back and let state and local governments take the lead in determining how best to solve their particular transportation challenges.

ISTEA also sought to promote research into technology and, by linking it to the Clean Air Act Amendments of 1990, was viewed as a means of addressing air pollution in the nation's major metropolitan areas. There was also a recognition that the private sector has a role to play in meeting the surface transportation needs of the future, so barriers to private sector involvement were reduced. Exhibit 36 shows how ISTEA was envisioned as changing prior federal transportation policy and legislation.

Exhibit 36

Major Differences Between ISTEA and Past Transportation Legislation

| <u>Aspect</u> | <u>Pre-Istea</u> | <u>Istea</u> |
|---------------------------|---|---|
| Structure | Rigid categories. | Flexible spending. |
| Emphasis | Mainly highways. | All surface modes. |
| Who Decides | State DOTs and MPOs. | MPOs & state DOTs. |
| How Decided | State & MPO Consensus. | Local consensus. |
| Purpose | Better roads. | Improved mobility. |
| Objective | Move cars. | Move goods & people. |
| Strategy..... | Improve highways. | Increase efficiency of all modes. |
| Target..... | Private cars and commercial vehicles. | Cars, commercial vehicles, transit, bikes, pedestrians. |
| Goal | Create highway infrastructure. | Reduce congestion, pollution, energy use. |
| Tactics | Build new roads, maintain existing roads. | Improve and maintain all existing transportation mode facilities. |
| Focus | Highway transport. | Highway and transit. |
| Economic Goal | New public works spending. | Cost-efficient mix of transportation investments. |
| Federal Dollar Share..... | Varied by category. | 80 percent on most projects. |
| Fiscal Tests | Limited or none. | Must be restrained and affordable. |
| Comprehensive Ties | Other highways. | Regional growth and growth management strategies. |
| Financing | Almost entirely public. | Also open to private investment. |
| Planning Scope | Federal projects. | All transportation mode projects. |
| Impact Tests | Environmental and safety. | Environmental, safety and land use. |

Source: Extracted from information contained in the *1996-1999 Transportation Improvement Program for the Pittsburgh Transportation Management Area (Draft)*, and modified by the LB&FC staff based on a review of *The Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102 - 240)*.

PennDOT's Compliance With ISTEA Requirements

We reviewed PennDOT's efforts to comply with the requirements of ISTEA and found, with a few minor exceptions, that PennDOT is in substantial compliance with the requirements. These requirements include:

- *Establish a cooperative planning process for selecting transportation projects.* These requirements, and PennDOT's compliance with them are discussed elsewhere in this finding.
- *Develop a comprehensive, long-range intermodal transportation plan.* PennDOT prepared and submitted an Interim Policy Plan to FHWA in December 1994. The FHWA and FTA accepted this plan in early 1995. An update to this plan, called the Transportation Policy Plan, was completed in December 1995.
- *Propose arterials and highways for designation in the National Highway System.* The Department submitted its proposal on April 30, 1993. Public Law 104-59 "National Highway Systems Designation Act of 1995" designated the National Highway System.
- *Establish management systems for (1) pavement of federal-aid highways, (2) bridges, (3) highway safety, (4) traffic congestion, (5) public transportation facilities and equipment, and (6) intermodal transportation facilities and systems as well as a highway traffic monitoring system.¹* PennDOT estimates it will spend about \$3.3 million to develop and implement the required systems. The systems and their anticipated completion dates are shown in Table 39.

Table 39

ISTEA Management Systems: PennDOT Implementation Status

| <u>Management/Monitoring System</u> | <u>Fully Operational Date</u> |
|---|-------------------------------|
| Pavement Management System (PMS)..... | October 1, 1997 |
| Bridge Management System (BMS) | October 1, 1998 |
| Highway Safety Management System (SMS) | October 1, 1996 |
| Traffic Congestion Management System (CMS)..... | October 1, 1996 |
| Public Transportation Facilities and Equipment Management System (PTMS) | October 1, 1996 |
| Intermodal Facilities and Systems Management System (IMS). | October 1, 1996 |
| Traffic Monitoring System for Highways (TMS/H)..... | October 1, 1996 |

Source: Developed from information contained in PennDOT's Management and Monitoring Systems Business Plan dated December 7, 1994.

¹This requirement was amended in 1995 to permit a state to elect not to implement one or more of the management systems originally required by ISTEA. Currently, Pennsylvania is planning to implement all of the management systems originally required.

Impact on Transportation Decisions

Although ISTEA was hailed as a major change to the nation's transportation policies, in practice the legislation appears to have had only limited impact on the percent of federally apportioned transportation funds to highways as compared to other modes of transit. Exhibit 37 shows that, nationwide, the percentage of federal surface transportation funds apportioned to highways was virtually unchanged between FFY 1990 (77.1 percent) and FFY 1995 (76.5 percent). The percentage of Pennsylvania's federal surface transportation funds apportioned to highways actually increased modestly during this period, from 73.1 percent in FFY 1990 to 76.3 percent in FFY 1995 (see Exhibit 38).

During this period, annual federal transportation apportionments nationwide, in constant 1990 dollars, increased from \$16.0 billion to \$20.6 billion; the highway component of this sum increased from \$12.3 billion to \$15.7 billion. During this period, Pennsylvania's annual federal transportation apportionments, in constant 1990 dollars, increased from \$0.7 billion to \$1.0 billion; the highway component of this sum increased from \$0.5 billion to \$0.8 billion.

Pennsylvania has flexed \$194.8 million (7.8 percent) of the \$2.5 billion in federal funding that has been available to be flexed between FFY 1992 and FFY 1995 (see Table 40). The \$194.8 million flexed by Pennsylvania included \$11.1 million from the Surface Transportation Program and \$183.7 million from the CMAQ program.

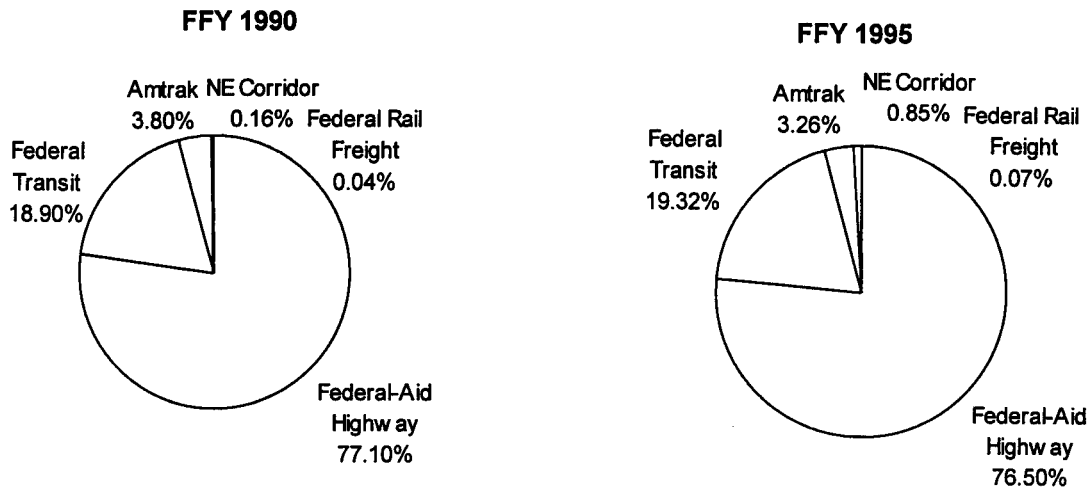
Pennsylvania has flexed \$11.1 million (6 percent) of the \$185.4 million in Surface Transportation Program funds that was available to be flexed since the inception of ISTEA through the end of FFY 1995 (see Table 40). This \$11.1 million was spent on 21 mass transit and nontraditional projects including a pedestrian bridge project in Chester County, a station renovation project in Delaware County, a bus transfer facility project in Lycoming County, a bike rack project in Centre County, a river walk project in Cambria County, a bikeway project in Allegheny County, a station project in Philadelphia County, and bus purchases in Lehigh, Lackawanna, and Centre Counties.

States can also flex money from the Congestion Mitigation and Air Quality (CMAQ) program, an ISTEA program designed to address air quality problems. Nationally, approximately 50 percent (\$170.1 million) of the \$340 million in CMAQ funds obligated by states and localities in FFY 1992 was used to finance mass transit and nontraditional projects. This percentage increased to about 76 percent for the first half of FFY 1993 (\$144 million of the \$190 million obligated). This is not surprising since ISTEA generally prohibits using CMAQ funds for projects that increase highway capacity unless such projects include high occupancy vehicle lanes.

From FFY 1992 through FFY 1995, Pennsylvania flexed \$183.7 million of the \$224.2 million (82.0 percent) in Congestion Mitigation and Air Quality (CMAQ) monies available to the Commonwealth to mass transit and nontraditional projects (see Table 40). These projects include bus purchases for SEPTA, Lehigh County, Westmoreland County, Washington County, Berks County, and Beaver County; elevated car purchases for SEPTA; establishment of park and ride lots for SEPTA, Mercer County, and Berks County; marketing activities for public transportation in Blair County, Westmoreland County, and Cambria County; the airport busway in Allegheny County; and facility development and engineering activities in Lancaster County and Berks County. Again, the flexing of CMAQ funds for these types of projects is not particularly surprising since, in general, ISTEA requires that these monies be used to finance projects that improve air quality.

Exhibit 37

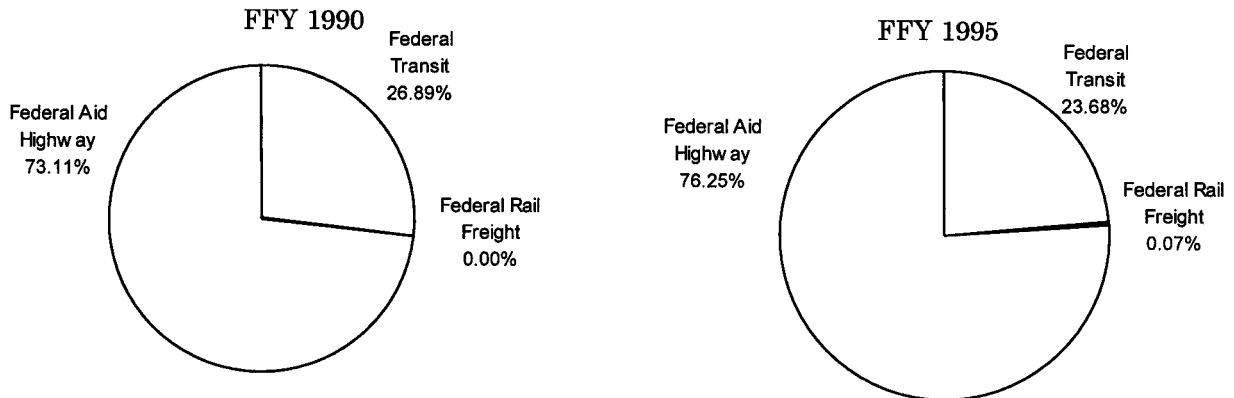
Distribution of Nationwide Federal Surface Transportation Funding, by Mode: FFY 1990 and FFY 1995



Source: Developed from information contained in the Federal Highway Administration's *Highway Statistics 1989, 1990, 1991, 1992, 1993, 1994*, the Federal Transit Administration's *1994 Statistical Summaries Table B "FTA Appropriations Fiscal Years 1961-1995," Federal Register "Urban Mass Transit Administration Fiscal Year 1990 and 1991 Formula Grant Apportionments Notice"* and "Federal Transit Administration Fiscal Year 1992, 1993, 1994, and 1995 Formula Grant Apportionment's Notice", and *U.S. Department of Transportation and Related Agencies Appropriations Act 1990, 1991, 1992, 1993, 1994, and 1995*.

Exhibit 38

Distribution of Pennsylvania's Federal Surface Transportation Funding, by Mode
FFY 1990 and FFY 1995*



*Grants to the National Railroad Passenger Corporation as well as funding for the Northeast Corridor Improvement Program are not included in the federal transportation funding for Pennsylvania since it could not be readily determined what amounts applied strictly to Pennsylvania.

Source: Developed from information contained in the Federal Highway Administration's *Highway Statistics 1989, 1990, 1991, 1992, 1993, 1994*, the Federal Transit Administration's *1994 Statistical Summaries Table B "FTA Appropriations Fiscal Years 1961-1995," Federal Register "Urban Mass Transit Administration Fiscal Year 1990 and 1991 Formula Grant Apportionments Notice"* and "Federal Transit Administration Fiscal Year 1992, 1993, 1994, and 1995 Formula Grant Apportionment's Notice," and *U.S. Department of Transportation and Related Agencies Appropriations Act 1990, 1991, 1992, 1993, 1994, and 1995*.

Table 40

Federal Highway Program Funds Flexed to Mass Transit and Nontraditional Projects*

FFY 1992 through FFY 1995
(\$ Millions)

| <u>Highway Program</u> | Funds Eligible for Flexing ^a | <u>Highway Program Funds Flexed</u> | | | Total Percentage Flexed |
|----------------------------------|---|-------------------------------------|-------------------------|-----------------------|-------------------------------|
| | | <u>Total</u> | <u>Mass Transit</u> | <u>Nontraditional</u> | |
| National Highway System ... | \$517.1 | \$ 0.0 | \$ 0.0 | \$ 0.0 | 0.00% |
| Surface Transportation..... | 185.4 | 11.1 | 4.3 | 6.8 | 5.99 |
| CMAQ..... | 224.2 | 183.7 | 96.2 | 87.5 | 81.94 |
| Bridge | 961.1 | 0.0 | 0.0 | 0.0 | 0.00 |
| Interstate Maintenance | 273.1 | 0.0 | 0.0 | 0.0 | 0.00 |
| Interstate Substitution | 0.1 | 0.0 | 0.0 | 0.0 | 0.00 |
| Minimum Allocation..... | 89.7 | 0.0 | 0.0 | 0.0 | 0.00 |
| Donor State Bonus | 45.3 | 0.0 | 0.0 | 0.0 | 0.00 |
| Apportionment Adjustment..... | <u>195.2</u> | <u>0.0</u> | <u>0.0</u> | <u>0.0</u> | <u>0.00</u> |
| Total..... | \$2,491.2 | \$194.8 | \$100.5 | \$94.3 | 7.82% |

*This table excludes (a) federal funding for interstate construction, which is ineligible for flexing; (b) approximately \$57 million in federal funding earmarked by the ISTEA legislation for transfer to, and transferred to, transit accounts for congestion relief and priority intermodal projects in Allegheny and Philadelphia Counties; and (c) federal funding allocated by Congress for specific highway construction projects (such congressionally earmarked project-specific allocations are not a part of federal apportionments).

^aThe Department, in their response to this audit, states that "the funds eligible for flexing column is overstated. Not all bridge and interstate maintenance funds can be flexed. Only 40 percent of bridge funds through 1995 and 50 percent in 1996 can be transferred to the Surface Transportation Program and then flexed. Only 20 percent of interstate maintenance funds can be flexed, and only if we certify that the interstate system is being properly maintained."

Source: Developed from information contained in the Federal Highway Administration's *Supplementary Tables - Apportionments Authorized for FY 1992, 1993, 1994, 1995*, the Federal Transit Administration's *1994 Statistical Summaries* Table 47-1 "Flexible Funds Obligations by Source," and spreadsheet information provided by the Pennsylvania Department of Transportation.

FINDING E6

PennDOT Has an Intelligent Transportation Systems Plan, but the Plan Lacks Time Frames and Does Not Address How Projects Are to Be Funded

Summary: PennDOT has developed, and is beginning to implement several components of, an Intelligent Transportation Systems (ITS) Strategic Plan for Pennsylvania. However, the plan does not have milestones or time frames for assessing progress nor does it identify potential funding sources. The plan also does not contain guidance or otherwise make provisions for cost-benefit analyses to evaluate the merits of individual ITS projects or to facilitate comparisons between projects.

The United States has responded to traffic congestion and other transportation problems by constructing new highways, widening existing roads, and building and improving rail transit systems. However, adding new capacity to the nation's surface transportation network is becoming increasingly costly. Transportation officials nationwide are seeking high technology substitutes to help solve transportation problems instead of adding new capacity.

United States Department of Transportation Policy

Congress, in 1991, authorized the use of advanced computer, communications, and sensor technologies to improve travel on highways and mass transit. Originally established under ISTEA as the Intelligent Vehicle Highway Systems program, the effort has come to be known as Intelligent Transportation Systems (ITS) to reflect a broader set of concerns. The U.S. Department of Transportation (DOT) manages the program.

The U.S. DOT has both a near term application (five years) and a longer term vision (20 years) for intelligent transportation systems. Over the near term, the U.S. DOT will help provide ITS solutions for initiatives already underway in many governmental jurisdictions. This help will include architecture, standards, operational tests, model deployment, technology transfer, and training efforts. The federal government will also research, develop, and test more sophisticated technologies that show promise of deployability over the next 10 to 20 years, including crash avoidance, the next generation of traffic management techniques, and automated highway research.

Spending authority nationally for the ITS program has grown from \$20 million in FFY 1991 to \$227.5 million in FFY 1995 and consists of several hundred projects in the following areas:

Travel and transportation management is aimed at keeping highway traffic flowing smoothly by using measures such as removing accidents and broken-down vehicles from the highways, controlling traffic signals, and providing information en route to travelers about roads and services.

Travel demand management is aimed at reducing travel by single-occupancy vehicles by providing pretrip information about traffic conditions and the availability of transit services and ridesharing opportunities.

Public transportation operations are aimed at providing en route information to transit users, enabling transit officials to track the location of their vehicles and monitor ridership demands, and enhancing the safety of transit operations.

Electronic payment is aimed at facilitating travel by allowing travelers to pay for parking, transit fares, and tolls through “smart cards.”

Commercial vehicle operations are aimed at facilitating interstate trucking by substituting electronic clearance for paperwork now required to comply with state requirements, weighing trucks at highway speeds instead of requiring them to stop at weigh stations, monitoring operations to enhance safety and improve efficiency, and providing for immediate notification of authorities in the case of accidents, especially if hazardous materials are involved.

Emergency management is aimed at enabling quick notification to authorities and prompt response in emergencies.

Advanced vehicle control and safety systems are aimed at employing devices such as collision avoidance warnings, automatic braking controls, and automated highway systems on which vehicles could move without being actively operated by a driver.

Pennsylvania Is One of Only a Few States With an ITS Strategic Plan

Only a few states (including Pennsylvania, Minnesota, and Virginia) have completed ITS Strategic Plans. These range from highly detailed plans that lay out specific projects to be undertaken to general plans, such as Pennsylvania’s, that provide initial guidance with more detailed plans to be developed at a later time.

PennDOT's Intelligent Transportation Systems Strategic Plan consists of six goals and supporting objectives that address transportation safety, efficiency, and reliability as well as the organization, funding, partnerships, policy, and outreach PennDOT sees as necessary for success. The ITS Strategic Plan is intended to further intermodalism and applications of ITS in both urban and rural areas. The strategic plan's six goals are to:

- Improve safety, efficiency, and reliability of the Commonwealth's transportation systems using ITS strategies.
- Establish a broad-based multidisciplinary organization structure to facilitate the planning, design, deployment, operations, and maintenance of ITS services.
- Foster and encourage public, private, and academic partnerships to implement and operate ITS.
- Allocate appropriate funding commensurate with program commitments and seek alternative financial mechanisms to manage and implement Pennsylvania's ITS Program.
- Address key legislative, regulatory, and policy issues to expedite ITS service delivery.
- Heighten awareness of ITS among customers and stakeholders.

Pennsylvania's strategic plan is general in nature and therefore lacks the specificity that will eventually be needed to begin to implement the plan. There are no milestones or specific timetables to assess progress toward achieving the ITS plan objectives. The plan also does not address how projects will be funded or contain guidance, or otherwise make provisions for, cost-benefit analyses to evaluate the merits of individual ITS proposals or facilitate comparisons between competing projects. Given the demands being placed on transportation funds, such analyses are essential if a convincing case is to be made for a specific project. PennDOT, in late summer 1996, expects to complete an evolving intermodal ITS Implementation Plan that will provide greater details on the ITS plan and the projected funding required to begin implementing the plan.

Pennsylvania's ITS effort, to date, has been focused in four areas:

Early Deployment Planning. Pennsylvania has five early deployment planning studies completed or underway and two more are planned. The Pittsburgh and the Pennsylvania Turnpike Corridor areawide early deployment planning studies have been completed. The areawide early deployment

studies for I-79 Erie to Pittsburgh, for Philadelphia, and for Scranton/Wilkes-Barre are currently ongoing. PennDOT also has plans for early deployment studies for Harrisburg and for Allentown/Bethlehem.

Commercial Vehicle Operations. PennDOT is participating in a multi-state, multi-national research effort to design and test an integrated heavy vehicle monitoring system using automatic vehicle identification, classification, and weigh-in-motion technology. The goal of one of these initiatives, known as the Heavy Vehicle Electronic Plate Program (HELP), is to develop a system where a legal truck can drive all the segments of the road network covered by the program without having to stop at weigh stations or ports-of-entry.

Priority Corridors Program. Pennsylvania, as a member of the I-95 Coalition, is participating in the I-95 Northeast Priority Corridor program which is designed to test, showcase, and deploy a variety of ITS services in the Corridor. There are a number of feasibility, operational testing, and deployment activities for ITS services underway along the entire Corridor.¹

Travel Management. PennDOT is participating in three test projects to improve travel management capabilities. The Satellite Communications Feasibility project on I-95 in Philadelphia is testing communication devices designed to monitor and facilitate the movement of traffic. The Integrated Corridor Management project located in the southern New Jersey and the metropolitan Philadelphia area is designed to provide traffic information to the traveler. The Delaware County ridetracking project will develop and evaluate an automated identification and billing service for paratransit services.

Recommendation

- 1. Updates to the Commonwealth's ITS plan should identify milestones, with specific dates, for achieving ITS objectives; identify realistic funding sources for meeting these milestones; and provide guidance for cost-benefit analyses of proposed projects to help ensure that the analyses are complete and can be used for comparisons between competing projects.**

¹PennDOT has substantially downscaled its ITS plan for I-95 in Pennsylvania. The original \$2 billion construction project to make I-95 in Pennsylvania a "highway of the future" is now rebudgeted as a more traditional, but still large, paving project at a cost of \$176 million.

FINDING E7

Relocation of PennDOT Employees Due to the June 1994 Fire Has Been Delayed

Summary: A June 1994 fire in the Transportation and Safety Building resulting in the closing of four floors and required the immediate relocation of 321 PennDOT employees as well as 328 employees of other agencies (e.g., the Bureau of Professional and Occupational Affairs) with offices in the building. In January 1996 the Administration announced plans to demolish the building and rebuild on the same site at an estimated cost of \$218 million. Current plans are to relocate the remaining workers by September 1996.

On June 16, 1994, an electrical fire ignited on the 6th floor of the Transportation and Safety Building (T&SB) causing extensive damage on floors four through seven and sending smoke throughout other floors of the building. The fire also caused the release of asbestos, contained in fire partitions, into the air. The building was closed for several days while air quality tests were conducted. When the building was reopened, floors four through seven were sealed off and workers on those floors were relocated.

The Department of State's operations, primarily the Bureau of Professional and Occupational Affairs and the Office of Operations and Contract Management, were most significantly affected. These operations, involving about 186 employees, were relocated to leased space within five days following the fire.

Other agencies having to relocate as a result of the fire include certain PennDOT operations, and certain offices of the Department of Health and the Public Utility Commission, as well as several small independent agencies. For example, the PennDOT and Department of Health computer centers have relocated to the IBM facility in Mechanicsburg and to the Harrisburg State Hospital grounds, respectively. Certain employees of the Public Utility Commission's Bureau of Transportation and Safety Compliance have moved to the Barto Building. Additionally, the Board of Claims and the State Tax Equalization Board have been relocated to the Fulton Bank Building.

The Commonwealth and Fireman's Fund Insurance Company initially agreed to compensation of nearly \$2.7 million for physical and structural damage to the building. In the days immediately following the fire, agency officials set up a task force to plan long-range options for building clean-up and restoration. On September 30, 1994, state officials announced that the building would be closed for four years so that a \$114 million clean-up and restoration project could take place. This

project would include total refurbishment, mechanical/fire/electrical code updates, and total asbestos abatement of the entire building. The building was to be completely vacated by the end of March 1995.

In March 1995 the LB&FC noted in its audit report *Costs and Consequences of the June 1994 Fire in the Transportation and Safety Building* that the evacuation was not complete due to delays in identifying appropriate facilities, obtaining leases, and accomplishing renovations at leased sites.¹ On August 25, 1995, state officials announced that the deadline for relocating workers was pushed to September 1996. On September 12, 1995, the State Board of Commissioners of Public Grounds and Buildings approved leases to relocate workers from the fire damaged building to buildings being constructed by local developers.

On January 12, 1996, Governor Ridge announced that the building would not be renovated but instead demolished and a new building constructed at a cost of \$218 million. The construction project will take 48 to 54 months to complete. This decision was made because of savings that would result from not having to lease long-term facilities for workers. Another consideration was that the fire aggravated existing problems with asbestos containment. Prospective tenants of the new building, in addition to PennDOT, are the Pennsylvania Emergency Management Agency, the State Historical and Museum Commission, the Department of Commerce, and the Public Utility Commission.

PennDOT's current plan is to move all employees out of the building by September 1996. The moves are to occur in phases beginning in July 1996. The Safety Administration group is moving to the Riverfront Office Center in south Harrisburg where they have a ten-year lease, and the remaining employees will be moving to the Forum Place Building as the floors are finished in this new building. When the new Transportation and Safety Building is constructed, all employees, excepting Safety Administration, will move into the new building.

As of May 1996, approximately 15 percent of PennDOT headquarters employees were in satellite facilities. Only 2.5 percent of PennDOT employees--the computer center personnel--were in their new permanent location.

PennDOT had budgeted just over \$15 million for fire-related moving expenses, including the costs of moving out, the data center, equipment/furniture costs, and lease costs in FY 1995-96. All but \$100,000 of this \$15 million had been encumbered as of May 1996. An additional \$19 million is budgeted for fire-related moving expenses in FY 1996-97. According to a PennDOT official, the FY 1996-97 budget estimates may change due to changes in lease costs from FY 1995-96.

¹We reported \$90 million in actual and projected costs related to the fire as of February 1995, including initial cleanup costs, HAZMAT containment and decontamination, and relocation and re-establishment of agency operations (\$43 million in leases and \$23 million in Data Centers). This figure did not include, for example, building costs related to renovation/decontamination, furniture replacement, or disposal of contaminated materials.

III. Performance Measures

Measure 1

Deputate: **Highway Administration**
Component: **Maintenance**

Measure: ***International Roughness Index***

Description: The International Roughness Index (IRI) rates pavement roughness using mechanical devices that measure the longitudinal profile of the roadway surface. PennDOT measures the interstates every year; 50 percent of other PennDOT roads are also evaluated each year using IRI. The 1995 figures, therefore, are based 50 percent on 1994 data and 50 percent on 1995 data.

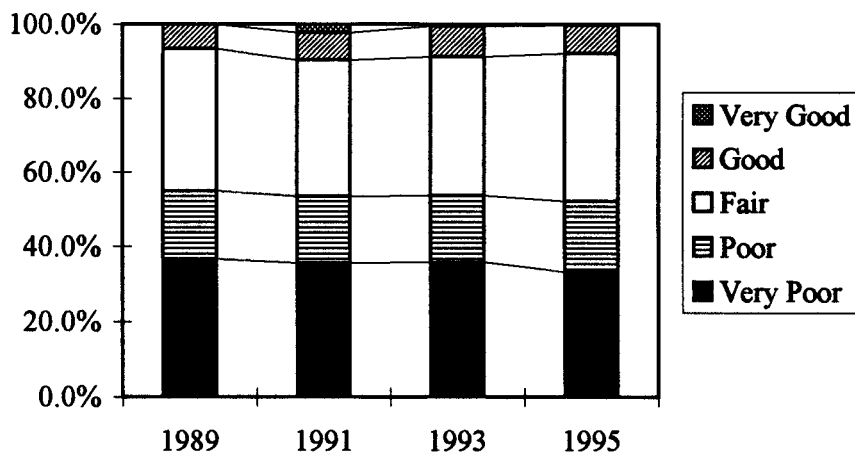
Type: Outcome

Goal: No stated goals.

Performance:

Over Time: Overall, the IRI index shows that PennDOT-maintained roads have improved marginally since 1989. Good and very good roads increased from 6.6 percent in 1989 to 7.9 percent in 1995, while poor and very poor roads decreased from 55 percent to 52 percent.

PennDOT-Maintained Highways by IRI Rating



Source: Developed from information provided by PennDOT's Roadway Management Division.

County Maintenance Districts: Cameron County had the lowest percentage of poor or very poor roads (22 percent); Huntingdon County had the highest percentage of poor or very poor roads (76 percent).

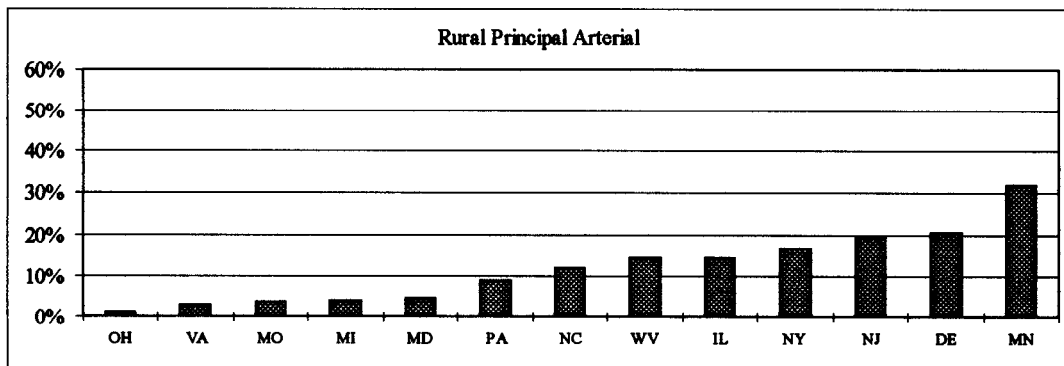
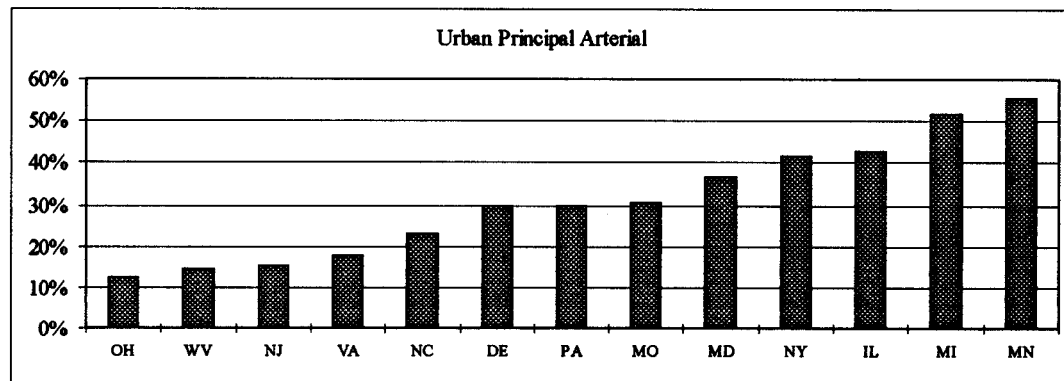
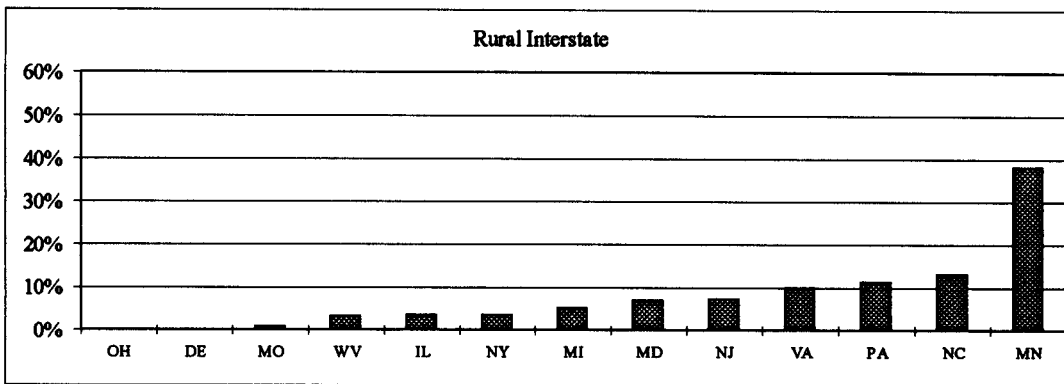
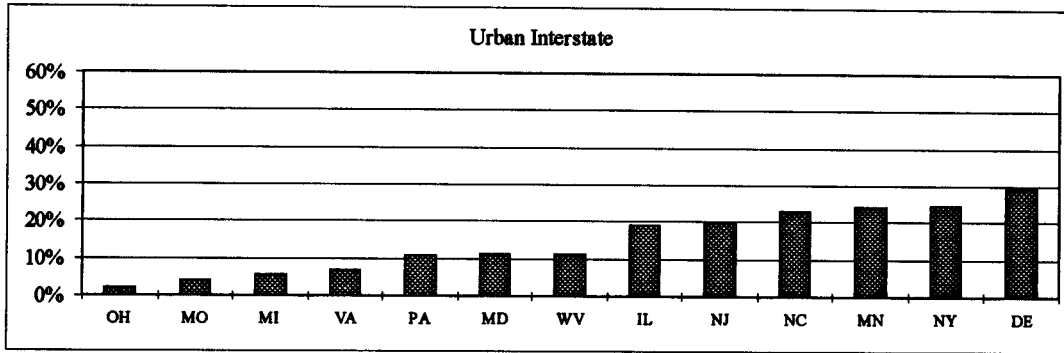
PennDOT-Maintained Roads in Poor or Very Poor Condition
(1995)

| <u>County</u> | <u>% Roads in Poor or Very Poor Condition</u> | <u>County</u> | <u>% Roads in Poor or Very Poor Condition</u> |
|---------------------|---|-------------------|---|
| Cameron..... | 22.5% | Snyder..... | 51.2% |
| Venango..... | 24.3 | Chester..... | 51.3 |
| Erie..... | 28.5 | Washington..... | 51.5 |
| Indiana..... | 34.5 | Franklin..... | 52.1 |
| Carbon..... | 37.5 | Adams..... | 52.2 |
| McKean..... | 37.8 | Montour..... | 53.0 |
| Warren..... | 39.2 | Union..... | 53.0 |
| Schuylkill..... | 39.6 | Clarion..... | 53.3 |
| Berks..... | 40.5 | Montgomery..... | 54.0 |
| Butler..... | 41.0 | Lawrence..... | 54.0 |
| Clinton..... | 41.0 | Blair..... | 54.8 |
| Mercer..... | 42.0 | Cambria..... | 56.0 |
| Northampton..... | 42.7 | Columbia..... | 56.2 |
| Centre..... | 43.0 | Beaver..... | 56.9 |
| Allegheny..... | 43.5 | Greene..... | 57.6 |
| Lehigh..... | 43.9 | Sullivan..... | 58.6 |
| Clearfield..... | 46.2 | Juniata..... | 60.2 |
| Lackawanna..... | 46.4 | Tioga..... | 60.7 |
| Elk..... | 47.2 | Lancaster..... | 61.2 |
| Mifflin..... | 47.2 | Wyoming..... | 62.0 |
| Fayette..... | 47.3 | Delaware..... | 62.0 |
| Bucks..... | 47.4 | Wayne..... | 62.9 |
| Monroe..... | 47.9 | Fulton..... | 63.0 |
| Cumberland..... | 48.3 | York..... | 63.1 |
| Luzerne..... | 48.3 | Forest..... | 63.4 |
| Crawford..... | 48.8 | Bedford..... | 66.7 |
| Jefferson..... | 49.4 | Somerset..... | 67.6 |
| Lycoming..... | 49.9 | Susquehanna..... | 68.0 |
| Dauphin..... | 50.0 | Potter..... | 68.9 |
| Lebanon..... | 50.1 | Armstrong..... | 69.7 |
| Pike..... | 50.5 | Philadelphia..... | 70.3 |
| Northumberland..... | 50.9 | Perry..... | 70.4 |
| Westmoreland..... | 50.9 | Bradford..... | 72.9 |
| | | Huntingdon..... | 75.7 |

Source: Developed from information provided by PennDOT's Roadway Management Division.

Compared to Other States: Compared to other states, within a 13 state peer group, the rideability of Pennsylvania's interstates and principal arterials was slightly below average, ranking no better than 5th and no worse than 11th for each of four different classes of roads measured.

Percent of Roads With Poor or Very Poor IRI Rating 1994



Source: Developed from the Federal Highway Administration's *Highway Statistics 1994*.

Measure 2

Deputate: **Highway Administration**
Component: **Maintenance**

Measure: ***Overall Pavement Index***

Description: The OPI index combines several measures into an overall measure of pavement quality. The four components of the OPI index areas follows: a Ride Index (based on International Roughness Index measurements), a Structural Index (based on structural distress indicators), a Surface Distress Index (based on surface problem indicators), and a Safety Index (based on the adverse effect of specific distresses on safety). Prior to CY 1991, all PennDOT-maintained roads were evaluated for the OPI index annually. Beginning in 1991, PennDOT began evaluating 50 percent of the roads each year. The 1995 figures, therefore, are based 50 percent on 1994 data and 50 percent on 1995 data. (OPI data is not available for other states.)

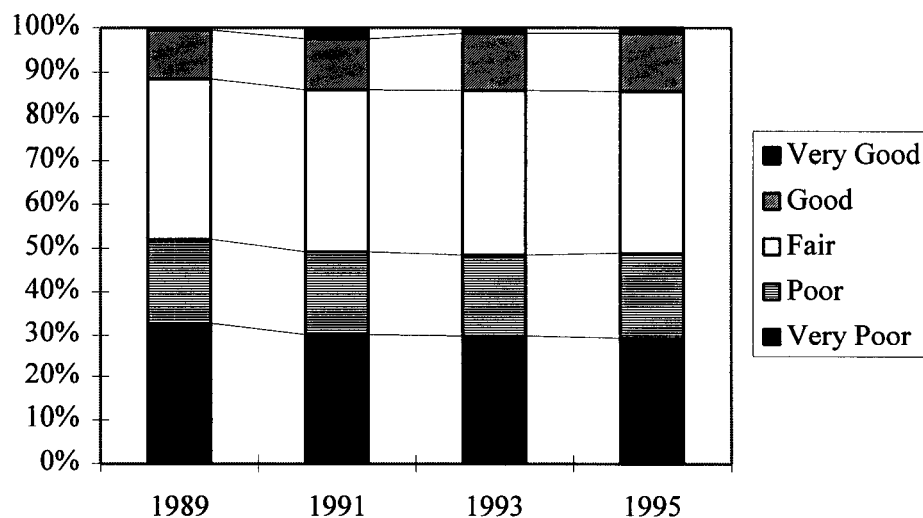
Type: Outcome

Goal: No stated goals.

Performance:

Over Time: The percentage of PennDOT maintained roads receiving a good or very good OPI rating increased from 12 percent in 1989 to 14 percent in 1995. Roads classified as poor or very poor decreased from 52 percent to 49 percent during the period.

PennDOT Maintained Highways by OPI Rating



Source: Developed from information provided by PennDOT's Roadway Management Division.

County Maintenance Districts: In 1995 Cameron County had the lowest percentage of PennDOT-maintained miles classified as poor or very poor at 13 percent. Armstrong County had the highest percentage classified as poor or very poor (76 percent).

**PennDOT-Maintained Roads in Poor or Very Poor Condition
(1995)**

| <u>County</u> | <u>% Roads in Poor or Very Poor Condition</u> | <u>County</u> | <u>% Roads in Poor or Very Poor Condition</u> |
|------------------|---|-------------------|---|
| Cameron..... | 13.1% | Fulton..... | 47.0% |
| Venango..... | 17.6 | Tioga..... | 47.0 |
| Clinton..... | 27.2 | York..... | 47.2 |
| Adams..... | 27.3 | Lackawanna..... | 47.2 |
| Allegheny..... | 29.9 | Columbia..... | 47.4 |
| Carbon..... | 31.1 | Montour..... | 47.4 |
| Northampton..... | 31.1 | Beaver..... | 48.5 |
| Elk..... | 31.2 | Philadelphia..... | 49.5 |
| Erie..... | 32.2 | Juniata..... | 49.7 |
| Lehigh..... | 32.7 | Sullivan..... | 51.1 |
| Mercer..... | 33.1 | Snyder..... | 51.7 |
| Franklin..... | 33.6 | Bucks..... | 53.0 |
| Berks..... | 33.7 | Jefferson..... | 53.9 |
| Schuylkill..... | 35.8 | Chester..... | 54.2 |
| Centre..... | 36.5 | Clarion..... | 54.6 |
| Lebanon..... | 36.7 | Blair..... | 55.3 |
| Dauphin..... | 37.0 | Butler..... | 57.1 |
| Crawford..... | 37.9 | Cambria..... | 59.5 |
| Lycoming..... | 41.7 | Fayette..... | 59.5 |
| McKean..... | 41.9 | Forest..... | 60.0 |
| Union..... | 42.4 | Bedford..... | 61.3 |
| Lawrence..... | 42.4 | Washington..... | 63.6 |
| Cumberland..... | 42.8 | Perry..... | 63.7 |
| Warren..... | 43.4 | Greene..... | 64.1 |
| Montgomery..... | 44.1 | Pike..... | 66.1 |
| Delaware..... | 44.6 | Bradford..... | 66.2 |
| Clearfield..... | 44.7 | Wyoming..... | 67.4 |
| Mifflin..... | 45.4 | Huntingdon..... | 67.9 |
| Indiana..... | 45.7 | Potter..... | 69.4 |
| Luzerne..... | 46.0 | Westmoreland..... | 70.5 |
| Lancaster..... | 46.4 | Somerset..... | 70.5 |
| Monroe..... | 46.5 | Wayne..... | 71.1 |
| Northumberland | 47.0 | Susquehanna..... | 73.8 |
| | | Armstrong..... | 76.1 |

Source: Developed from information provided by PennDOT's Roadway Management Division.

Measure 3

Deputate: **Highway Administration**
Component: **Maintenance**

Measure: ***Dollar Amount of Highway Needs***

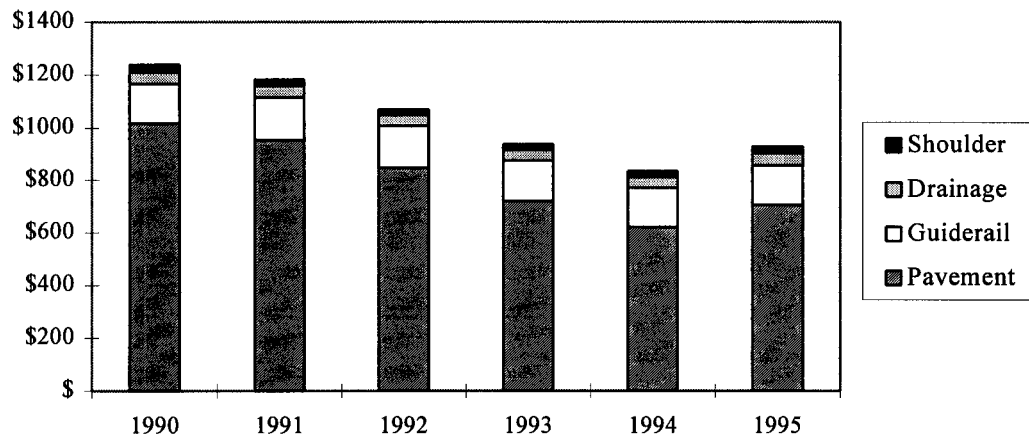
Description: As required by Act 1980-68, PennDOT biennially surveys its highways to assess maintenance needs and the estimated cost to correct the identified deficiencies. This analysis is done through PennDOT's Systematic Technique to Analyze and Manage Pennsylvania Pavements (STAMPP). The STAMPP system identifies 33 categories of improvements, including pavement, shoulder, guiderail, and drainage needs. Treatments range from routine maintenance to major reconstruction.

Type: Outcome

Goal: No stated goal.

Performance: Based on 1995 assessments, PennDOT-maintained highways require over \$926 million worth of improvements. This is a 25 percent decrease from 1990 but an increase of 11 percent from 1994.

PennDOT Highway Needs
(In Millions)



Source: Developed from PennDOT's *Roadway Needs Report*.

Measure 4

Deputate: **Highway Administration**
Component: **Maintenance**

Measures: ***Highway Maintenance Expenditures***
Highway Maintenance Expenditures Per Lane Mile

Description: Total expenditures (federal and state funding combined) for highway and bridge maintenance activities on state DOT-maintained highways (including interstates) as reported to the Federal Highway Administration, including expenditures for interstates and other state DOT-maintained highways.

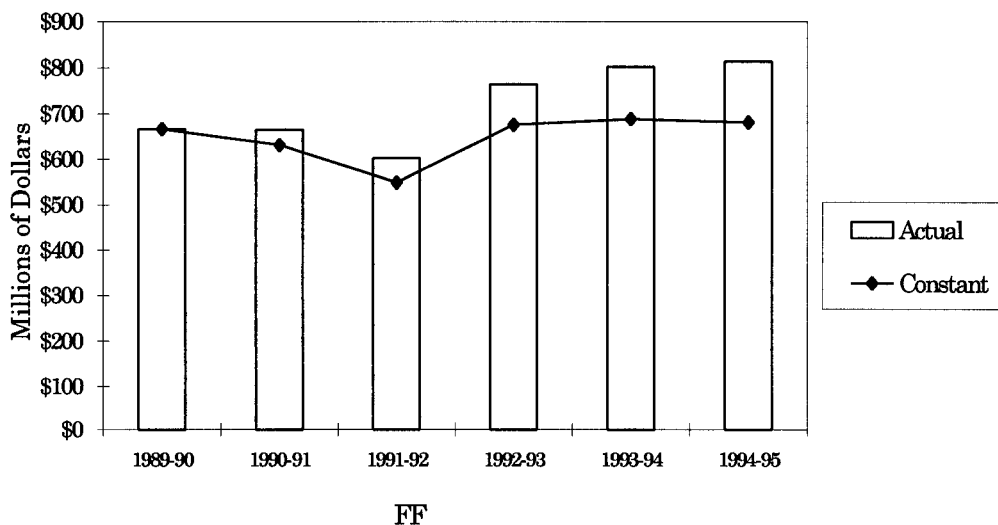
Type: Input

Goal: No stated goals.

Performance:

Over Time: During the six-year period FY 1989-90 to FY 1994-95, highway maintenance expenditures on PennDOT-maintained highways increased by 22 percent in actual dollars, but increased by only 2 percent in constant 1989 dollars. Expenditures were \$814 million in FY 1994-95. Appendix C contains information on individual counties.

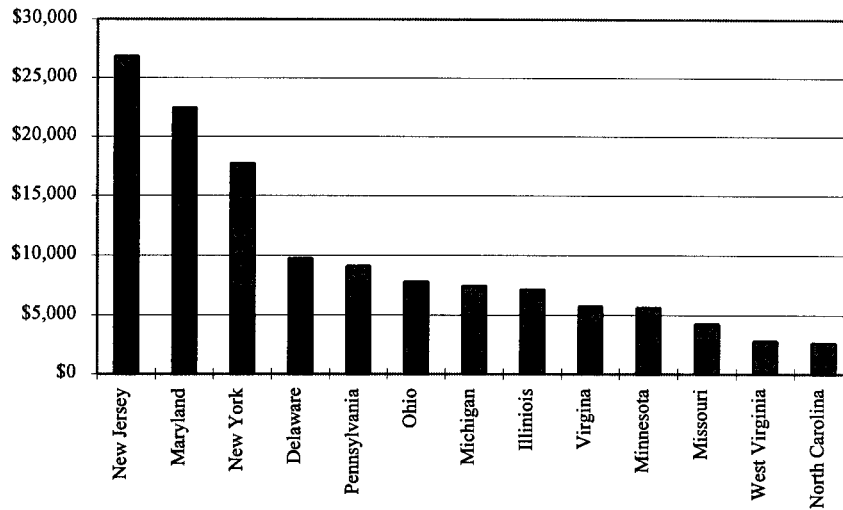
PennDOT Expenditures for Maintenance Activities
(\$ Millions)



Source: Compiled from information provided by PennDOT's Bureau of Fiscal Management and Bureau of Transportation Systems Performance.

Compared to Peer States: In 1994, PennDOT expended \$8,926 in maintenance costs per lane mile, ranking it fifth highest among the 13 state peer group reviewed.

Maintenance Expenditures Per Lane Mile*
(Federal and State Funding Combined: FY 1994-95)



*Pennsylvania categorizes betterment projects as maintenance, while some states include them in their construction budgets.

Source: Compiled from the Federal Highway Administration's 1994 Highway Statistics Tables SF-4 and HM-81 and modified information provided by the states' transportation departments.

Deputate: **Highway Administration**

Component: **Maintenance**

Measure: ***Lane Miles Receiving Surface Improvements***

Description: Surface improvements include *New Construction* (Interstate¹ and Other New Construction²), *Surface Improvement Reconstruction* (Interstate PM³, Interstate I-4R⁴, Reconstruction⁵), and *Surface Improvement Maintenance* (Betterments⁶, Resurfacing⁷, Leveling & Sealing⁸, Surface Repair⁹) performed on PennDOT maintained roads.

Type: Output

Goal: PennDOT's annual goals are as shown on the table on the following page.

Performance: New construction decreased from 58 lane miles in FY 1989-90 to 13 lane miles in FY 1994-95. Major interstate work has increased significantly in recent years; betterment and resurfacing projects have decreased.

¹*Interstate Construction:* Sections required to complete or extend an existing interstate roadway.

²*Other New Construction:* New sections of infrastructure other than interstate which include new alignments and related support facilities.

³*Interstate PM:* Preventative maintenance performed on interstate facilities, which includes, but is not limited to, patching, crack sealing, and pothole repairs.

⁴*Interstate I-4R:* Includes interstate reconstruction, restoration, resurfacing, and rehabilitation.

⁵*Reconstruction:* Expressway and non-interstate projects: Capital projects other than New Construction, Interstate Construction, or Interstate I-4R. May include betterments.

⁶*Betterments:* Major rehabilitation of highways including structural surface improvements with shoulder updates, guiderail updates, and drainage improvements.

⁷*Resurfacing:* The placing of one or more new courses on an existing surface.

⁸*Leveling & Sealing:* Leveling is the application of bituminous material over extended lengths of roadway to correct surface distortions such as irregular cross sections or wheel path rutting. A seal coat is a thin treatment consisting of bituminous material, usually with cover aggregate, applied to a surface course.

⁹*Surface Repair:* Mechanized patching operations using plant mix or liquid bituminous and aggregate to maintain riding quality on limited sections of bituminous highway.

Lane Miles of Surface Improvements

| | FY 1989-90 | | FY 1990-91 | | FY 1991-92 | | FY 1992-93 | | FY 1993-94 | | FY 1994-95 | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|
| | Goal | Actual | Goal | Actual | Goal | Actual | Goal | Actual | Goal | Actual | Goal | Actual |
| <u>New Construction</u> | | | | | | | | | | | | |
| Interstate Construction | 46 | 46 | 13 | 9 | 3 | 16 | 3 | 13 | 2 | 1 | 1 | 1 |
| New Construction and Right of Way | <u>12</u> | <u>12</u> | <u>44</u> | <u>40</u> | <u>22</u> | <u>12</u> | <u>22</u> | <u>23</u> | <u>25</u> | <u>27</u> | <u>12</u> | <u>12</u> |
| Total | 58 | 58 | 57 | 49 | 25 | 28 | 25 | 36 | 27 | 28 | 13 | 13 |
| <u>Surface Improvement Reconstruction</u> | | | | | | | | | | | | |
| Interstate PM | -- | -- | -- | -- | -- | -- | -- | -- | 27 | 27 | 90 | 86 |
| Interstate I-4R | 115 | 115 | 124 | 175 | 58 | 76 | 20 | 143 | 120 | 117 | 112 | 112 |
| Reconstruction | <u>19</u> | <u>19</u> | <u>27</u> | <u>27</u> | <u>21</u> | <u>21</u> | <u>33</u> | <u>128</u> | <u>103</u> | <u>281</u> | <u>276</u> | <u>276</u> |
| Total | 134 | 134 | 151 | 202 | 79 | 97 | 53 | 298 | 250 | 488 | 474 | 474 |
| <u>Surface Improvement Maintenance</u> | | | | | | | | | | | | |
| Betterments | 339 | 323 | 278 | 274 | 275 | 246 | 330 | 310 | 296 | 287 | 168 | 170 |
| Resurfacing | 1,445 | 1,733 | 1,395 | 1,443 | 1,807 | 1,944 | 2,275 | 1,726 | 1,695 | 1,474 | 1,474 | 1,511 |
| Leveling & Sealing ^a | 3,017 | 3,101 | 3,248 | 3,150 | 3,258 | 3,234 | 3,136 | 3,159 | 3,349 | 3,546 | 3,657 | 3,637 |
| Surface Repair | <u>1,699</u> | <u>1,795</u> | <u>1,579</u> | <u>1,744</u> | <u>1,562</u> | <u>1,590</u> | <u>1,271</u> | <u>985</u> | <u>1,026</u> | <u>1,116</u> | <u>1,167</u> | <u>1,167</u> |
| Total | 6,500 | 6,952 | 6,500 | 6,611 | 6,902 | 7,014 | 6,908 | 7,015 | 6,356 | 6,554 | 6,410 | 6,485 |

^aIncludes seal coat alone or a leveling course followed by a seal coat.

Source: Compiled from PennDOT's *Management Objectives Report*.

Measure 6

Deputate: **Highway Administration**
 Component: **Maintenance**

Measure: ***Maintenance Cycles***

Description: The expected average useful life of various maintenance treatments.

Type: Output

Goal: PennDOT's desired goals are shown in the table below for each of the twelve maintenance activities for which optimal cycles have been established.

Performance: PennDOT currently meets its maintenance cycle goals for only three of the 12 maintenance activities. It has improved significantly toward meeting the concrete pavement rehabilitation goal, but has fallen behind in pipe replacement and leveling.

PennDOT Maintenance Cycles

| <u>Activity</u> | <u>Desired Cycle (Years)</u> | <u>Four-Year Cycle Ending FY1989-90</u> | | <u>Four-Year Cycle Ending FY1994-95</u> | |
|---------------------------------------|------------------------------|---|-----------------|---|-----------------|
| | | <u>Actual</u> | <u>Met Goal</u> | <u>Actual</u> | <u>Met Goal</u> |
| Betterments..... | 30 | 28.1 | Yes | 31.7 | No |
| Surface Seals | 6 | 5.4 | Yes | 5.1 | Yes |
| Leveling | 12 | 7.1 | Yes | 17.3 | No |
| Resurfacing (Bituminous) | 10 | 15.9 | No | 13.7 | No |
| Concrete Pavement Rehabilitation..... | 15 | 41.2 | No | 21.7 | No |
| Shoulder Cutting..... | 3 | 2.7 | Yes | 2.4 | Yes |
| Pipe Replacement..... | 40 | 61.1 | No | 71.3 | No |
| | 60 ^a | | | | |
| Joint Sealing..... | 5 | 6.5 | No | 6.2 | No |
| Bridge Deck Cleaning | 1 | b | | 1.3 | No |
| Bridge Cleaning Sub-Structure | | | | | |
| Open Mesh..... | 1 | b | | 1.8 | No |
| Other Steel | 2 | b | | 2.5 | No |
| All Other..... | 4 | b | | 4.0 | Yes |

^aGoal changed beginning with the four year cycle ending in FY 1992-93.

^bDesired maintenance cycle not established until FY 1991-92.

Source: Compiled from PennDOT Business Plans.

Measure 7

Deputate: **Highway Administration**
Component: **Maintenance**

Measure: ***Size and Average Age of PennDOT's General Equipment Fleet***

Description: The number and average age of PennDOT's six major types of equipment. Refurbished equipment is considered as "new" when calculating average age.

Type: Output

Goal: The expected life of the six various types of equipment is shown below, but PennDOT does not have a stated goal of replacing or refurbishing equipment after it exceeds its expected life.

Performance: As shown below, many pieces of PennDOT's general equipment fleet are beyond their expected life. In particular, 57 percent of PennDOT's graders and 44 percent of its backhoes are older than their expected life.

Number and Average Age of Selected PennDOT Equipment
(as of 12/95)

| <u>Equipment</u> | <u>Number</u> | <u>Average Age</u> | <u>Expected Life</u> | <u>Older Than Expected Life</u> |
|--------------------------|---------------|--------------------|----------------------|---------------------------------|
| Dump Truck, Tandem.... | 710 | 6 years | 10 years | 6.3% |
| Dump Truck, Single | 1,569 | 6 years | 10 years | 20.0% |
| Loader | 521 | 9 years | 10 years | 38.2% |
| Grader..... | 237 | 11 years | 10 years | 57.0% |
| Backhoe..... | 213 | 11 years | 10 years | 44.1% |
| Excavator..... | 102 | 10 years | 12 years | 34.3% |

Source: Compiled from information provided by PennDOT's Equipment Division.

Measure 8

Deputate: **Highway Administration**
Component: **Construction**

Measures: **Capital Expenditures**

Capital Expenditures Per Lane Mile

Description: Capital expenditures (as opposed to maintenance expenditures) for PennDOT-maintained highways and bridges (federal and state funding combined) as reported to the Federal Highway Administration. Expenditures include right-of-way acquisition, preliminary and construction engineering, as well as construction costs for new highways, widening, and reconstruction. Lane miles include only roadways maintained by the state department of transportation.

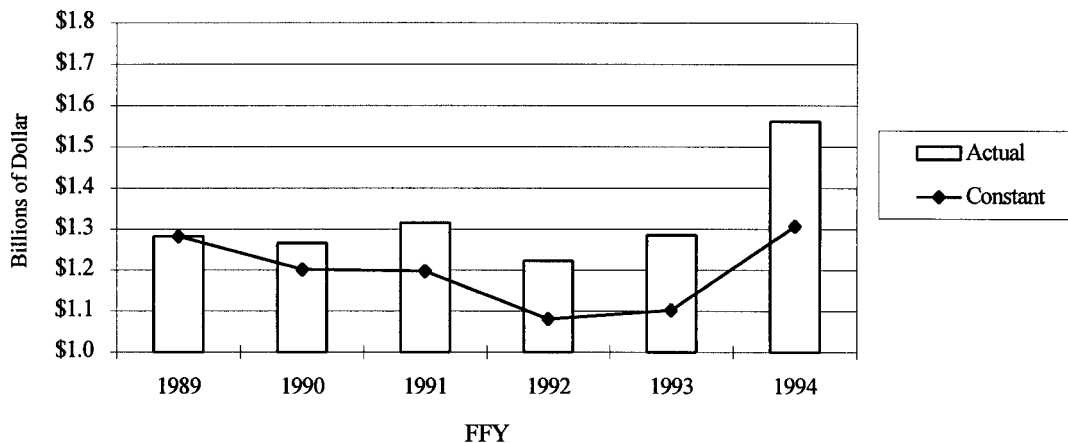
Type: Input

Goal: No stated goals.

Performance:

Over Time: During the six-year period FY 1989-90 to FY 1994-95, total capital expenditures in Pennsylvania increased by 22 percent in actual dollars, but by only 2 percent in constant 1989 dollars.

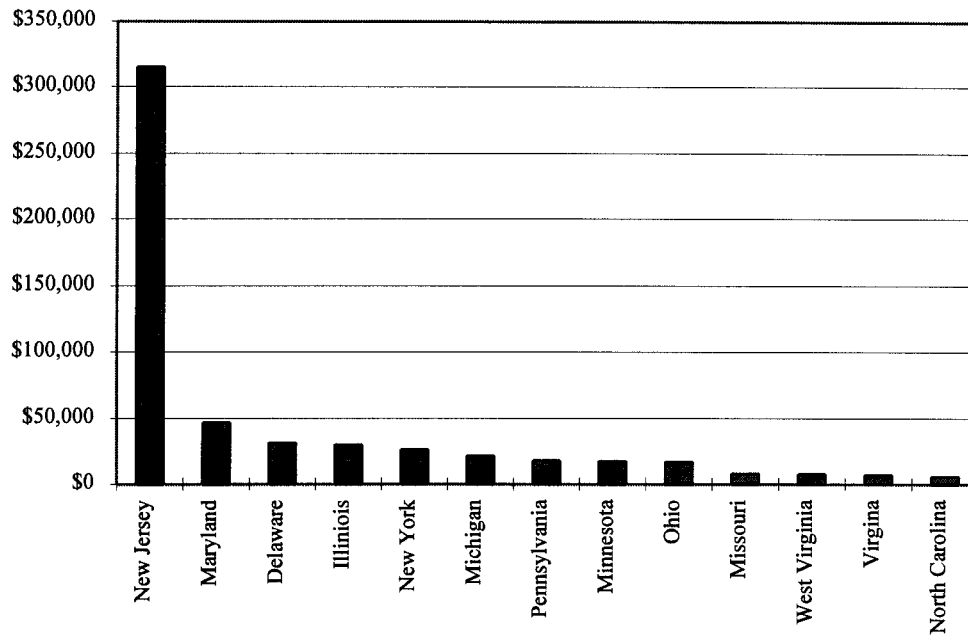
Capital Expenditures for PennDOT Highway and Bridge Construction (Federal and State Funding Combined)



Source: Compiled from Federal Highway Administration's *Highway Statistics*, Table SF-4C, "Disbursements for State-Administered Highways: Classified by Function." Federal fiscal year 1994 runs from October 1, 1993, through September 30, 1994.

Peer State Comparison: On a per lane mile basis, Pennsylvania's capital expenditures (federal and state funding combined) for state DOT-maintained highways and bridges ranks seventh lowest among the 13 state group.

Construction Expenditures Per Lane Mile
(Federal and State Funding Combined - FY 1994-95)



Source: Compiled from the Federal Highway Administration's *1994 Highway Statistics* Tables SF-4 and HM-81 and modified information provided by the states' transportation departments.

Measure 9

Deputate: **Highway Administration**
 Component: **Construction**

Measures: **Percent of Projects 5 Percent or More Over Original Project Estimate**

Description: The percent of PennDOT highway and bridge construction projects that, when completed, were 5 percent or more over the original project estimate.

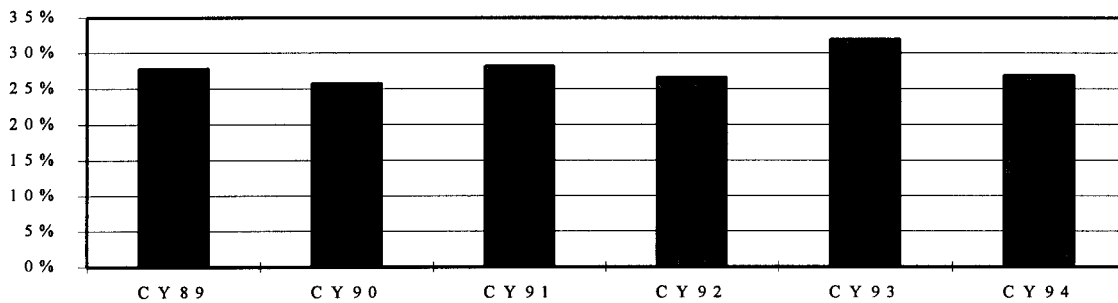
Type: Efficiency

Goal: No stated goal.

Performance:

Over Time: In recent years, about 28 percent of PennDOT's highway and bridge construction projects were 5 percent or more over the original project estimate.

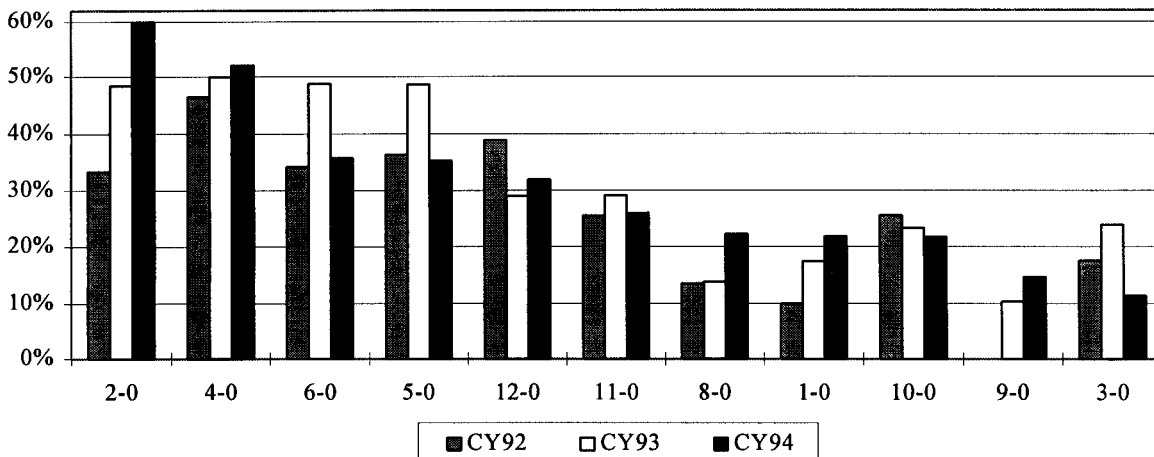
Percent of Construction Projects 5 Percent or More Over Original Project Estimate



Source: Compiled from information provided by PennDOT's Bureau of Construction and Materials.

Engineering District Comparison: In 1994, Engineering District 2-0 had the highest percentage of projects (60 percent) 5 percent or more over the original project estimate; District 3-0 had the lowest percentage.

Percent of Construction Projects 5 Percent or More Over Original Project Estimate



Source: Compiled from information provided by PennDOT's Bureau of Construction and Materials.

Measure 10

Deputate: **Highway Administration**

Component: **Construction**

Measures: ***Percent of Projects Completed on Time***

Description: The percentage of PennDOT highway and bridge construction projects completed within the original time estimate.

Type: Efficiency

Goal: No stated goal.

Performance:

Between 1989 and 1994, on average only 32 percent of PennDOT's highway and bridge projects were completed within the original time estimate.

Projects Completed on Time

| | <u>1989</u> | <u>1990</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Total Projects | 381 | 547 | 607 | 410 | 476 | 487 |
| Projects Completed on Time | 80 | 155 | 190 | 161 | 165 | 179 |
| Percent of Projects Completed on Time | 21% | 28% | 31% | 39% | 35% | 37% |

Source: Compiled from information provided by PennDOT's Bureau of Construction and Materials.

Deputate: **Highway Administration**
 Component: **Bridges**

Measure: ***Percent of Bridges That Are Structurally Deficient or Functionally Obsolete***

Description: Bridges that do not meet load carrying and functional standards are classified as either structurally deficient or functionally obsolete. Structurally deficient bridges are inadequate for existing traffic due to deterioration in their decks, supporting members, or superstructures. They may be posted for reduced vehicle weights or closed to traffic. Functionally obsolete bridges cannot adequately handle current traffic due to too few or too narrow lanes, poorly aligned approaches, or restrictive overhead clearances. This measure includes only bridges over 20 feet in length as reported annually to the FHWA. Information is presented separately for state-owned and locally owned bridges.

Type: Outcome

Goal: No stated goals.

Performance:

Over Time: Between 1989 and 1994, the percentage of state-owned bridges classified as structurally deficient decreased from 24.7 percent to 23.0 percent. The percentage classified as functionally obsolete, however, increased from 11.2 percent to 14.8 percent. At the local level, the percentage of structurally deficient bridges also decreased, but the percentage of functionally obsolete bridges rose from 13.4 percent to 18.2 percent.

Deficient Bridges in Pennsylvania

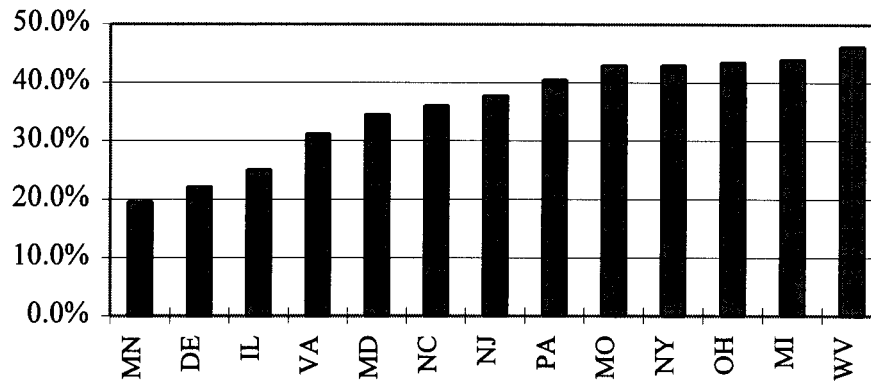
| | 1989 | | 1994 | |
|------------------------------|---------------|----------------|---------------|----------------|
| | <u>Number</u> | <u>Percent</u> | <u>Number</u> | <u>Percent</u> |
| State-Owned Bridges | | | | |
| Structurally Deficient | 3,980 | 24.7% | 3,732 | 23.0% |
| Functionally Obsolete | 1,806 | 11.2 | 2,411 | 14.8 |
| Sub-Total Deficient..... | 5,786 | 35.9 | 6,143 | 37.8 |
| Sub-Total Not Deficient | <u>10,310</u> | 64.1 | <u>10,104</u> | 62.2 |
| Total State Bridges..... | 16,096 | | 16,247 | |
| Local Bridges | | | | |
| Structurally Deficient | 2,076 | 30.6% | 1,959 | 28.6% |
| Functionally Obsolete | 909 | 13.4 | 1,245 | 18.2 |
| Sub-Total Deficient..... | 2,985 | 44.0 | 3,204 | 46.7 |
| Sub-Total Not Deficient | <u>3,799</u> | 56.0 | <u>3,650</u> | 53.3 |
| Total Local Bridges..... | 6,784 | | 6,854 | |

Source: Developed from information provided by PennDOT's Bridge Design Quality Assurance Division.

Compared to Peer States:

In 1994, the most recent year for which comparative data is available, Pennsylvania ranked sixth highest in the overall percentage of deficient bridges within the 13 peer state group we examined.

**Deficient Bridges in PA and Other States*
1994**



*Includes both structurally deficient and functionally obsolete bridges over 20 feet in length at both the state and local level.

Source: Developed from *Resources Versus Results: Comparative Performance of State Highway Systems: 1984-1994*, by David T. Hartgen and David C. Spears.

Deputate: **Highway Administration**

Component: **Bridges**

Measure: ***Cost to Improve Deficient Bridges***

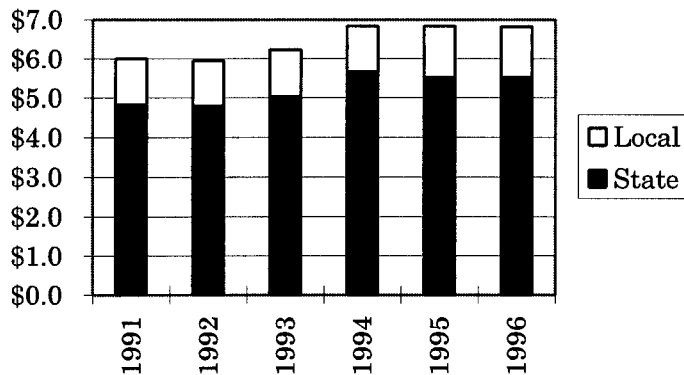
Description: PennDOT biennially inspects all public bridges over 20 feet in length to identify deficiencies and needed improvements. PennDOT's Bridge Management System then estimates costs for each needed improvement to deficient bridges and determines the total cost to correct all identified deficiencies.

Type: Outcome

Goal: No stated goal.

Performance: Based on 1996 assessments, PennDOT estimates bridge needs at \$6.8 billion. This is a 13.6 percent increase from 1991.

Pennsylvania Bridge Needs
(In Billions)



Source: Developed from information provided by PennDOT's Bureau of Design.

Measure 13

Deputate: **Highway Administration**
 Component: **Bridges**

Measure: ***Number and Cost of Bridge Projects Completed***

Description: The number and cost of new construction, replacement, and rehabilitation projects for public bridges greater than 8 feet in length completed between FY 1989-90 and FY 1994-95.¹ Replacement is building a new bridge to replace an existing bridge; rehabilitation involves major structural repairs to an existing bridge.

Type: Output

Goal: No stated goals.

Performance:

Between FY 1989-90 and FY 1994-95, PennDOT newly constructed, replaced, or rehabilitated an average of 461 bridges a year at an average cost of \$704,000 per bridge. In FY 1994-95, the number of large bridge projects completed was at a six-year low, but the number of smaller bridge rehabilitation projects was at a six year high.

**Bridges Replaced, Rehabilitated, or Constructed
(\$000)**

| FY | <u>Bridge Bill</u> | | | <u>Motor License Fund</u> | | | <u>Grand Total</u> | | |
|-------|--------------------|--------------------------------------|--------------|---------------------------|---|------------|--------------------|----------------|------------|
| | # | Capital Budget Total ^a | Avg.\$ | # | Construction & Maintenance Appropriation Total ^b | Avg.\$ | # | Total | Avg.\$ |
| 89-90 | 227 | \$ 236,359 | \$1,041 | 204 | \$34,408 | \$169 | 431 | \$ 270,767 | \$628 |
| 90-91 | 233 | 320,487 | 1,375 | 186 | 53,502 | 288 | 419 | 373,989 | 893 |
| 91-92 | 155 | 168,883 | 1,090 | 207 | 57,943 | 280 | 362 | 226,826 | 627 |
| 92-93 | 170 | 319,666 | 1,880 | 397 | 104,636 | 264 | 567 | 424,302 | 748 |
| 93-94 | 154 | 201,562 | 1,309 | 271 | 82,298 | 304 | 425 | 283,860 | 668 |
| 94-95 | <u>136</u> | <u>282,349</u> | <u>2,076</u> | <u>427</u> | <u>85,456</u> | <u>200</u> | <u>563</u> | <u>367,805</u> | <u>653</u> |
| Total | 1,075 | \$1,529,306 | \$1,423 | 1,692 | \$418,243 | \$247 | 2,767 | \$1,947,549 | \$704 |

^aTotal project costs for bridges completed that year. Includes federal, state, and local funds.

^bTotal project costs for bridges completed that year. MLF project costs include both federal and state funds.

Source: PA Department of Transportation - Appropriations 284 and 289 from the Center for Program Development and Management; Appropriations 187 and 185 from PennDOT's *District Business Plan*.

¹Does not include routine bridge maintenance.

Measure 14

Deputate: **Highway Administration**

Component: **Bridges**

Measure: ***Number of Bridges Inspected***

Description: Number of state bridges eight feet or longer in length inspected by PennDOT.

Type: Output

Goal: PennDOT's annual goals are shown in the table below.

Performance: PennDOT has consistently exceeded its scheduled inspection goals.

Number of State Bridges Inspected, Scheduled and Actual

| | <u>FY 89-90</u> | <u>FY 90-91</u> | <u>FY 91-92</u> | <u>FY 92-93</u> | <u>FY 93-94</u> | <u>FY 94-95</u> |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Scheduled..... | 13,208 | 15,078 | 13,724 | 14,206 | 13,280 | 13,705 |
| Actual..... | 15,646 | 15,895 | 14,292 | 14,984 | 14,282 | 14,667 |

Source: Developed from Item 15 of PennDOT's *District Management Summary Report*.

Deputate: **Highway Administration**
 Component: **Maintenance and Construction**

Measures: *Federal and State Highway Expenditures*

Description: Total federal and state expenditures for highway administration, maintenance and construction for PennDOT-maintained highways.

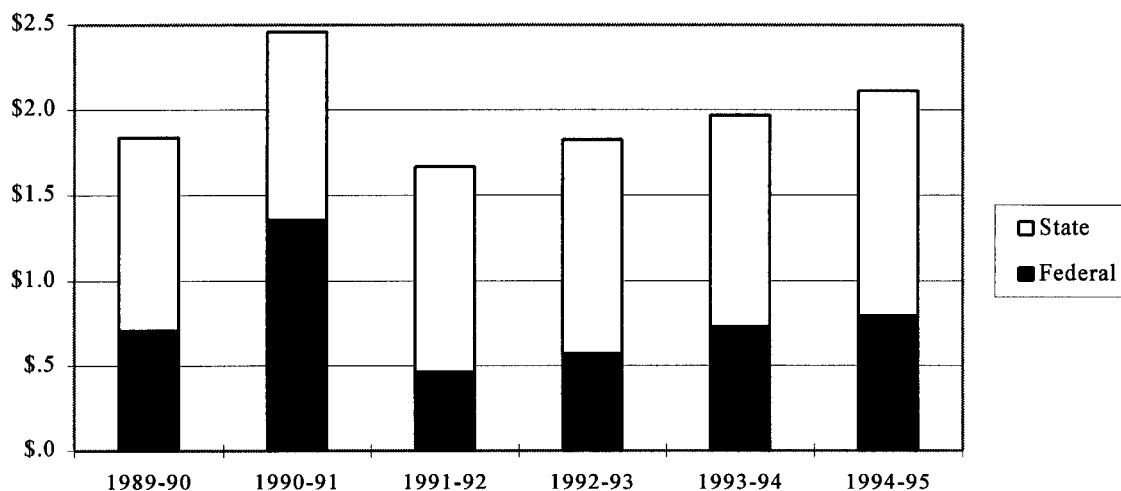
Type: Input

Goal: No stated goals.

Performance:

Over Time: During the six year period FY 1989-90 to FY 1994-95, total highway program expenditures in Pennsylvania increased by 15 percent in actual dollars, but in constant 1989 dollars spending decreased by 4 percent. Overall, state funding increased by 17 percent and federal funding increased by 12 percent (in constant 1989 dollars, a 6 percent increase and a 2 percent decrease, respectively). During the period, federal dollars comprised 39 percent of total expenditures.

Total PennDOT Highway Expenditures
 (\$ Billions)



Source: Governor's Executive Budget; Status of Appropriations; and The Federal Highway Administration's Highway Statistics Table FA-3, "Expenditures of Federal Funds Administered by the Federal Highway Administration."

Measure 16

Deputate: **Highway Administration**
Component: **Maintenance and Construction**

Measures: ***Actual Construction and Maintenance Contract Costs as a Percent of Original Contract Bid***

Description: Final costs for all completed construction and maintenance contracts as a percent of the original contract bid.

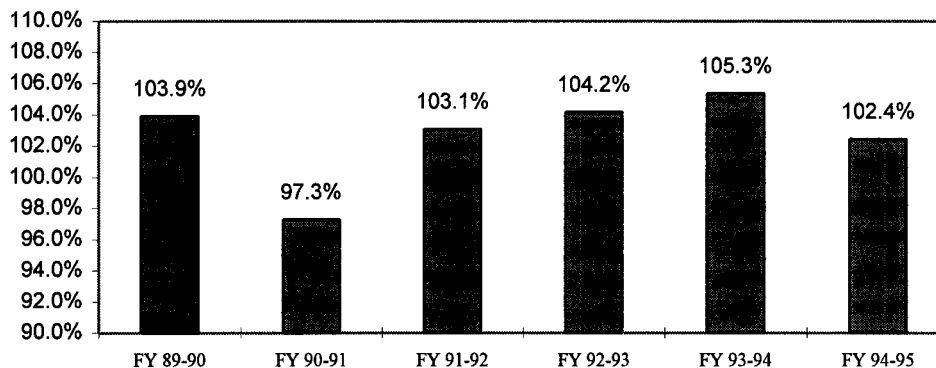
Type: Efficiency

Goal: No stated goals.

Performance:

Over Time: Over the past six fiscal years, PennDOT's construction and maintenance contracts combined averaged 102.7 percent of the original contract bid price. In FY94-95, Engineering District 2-0 had the highest final contract cost as a percent of contract bid price, averaging 109.3 percent; Engineering District 10-0 had the lowest, averaging 96.1 percent of contract bid price.

Percent Final Contract Cost to Contract Bid (Statewide)



Source: Compiled from information contained in PennDOT's *District Management Summary Report*, "Final vs. Bid Contract Comparison."

Deputate: **Highway Administration¹**
 Component: **Maintenance and Construction**

Measure: ***Volume to Service Flow Ratio***

Description: This ratio shows the relationship of traffic flow to roadway capacity. The FHWA considers a highway to be congested when the volume to service flow ratio exceeds 0.8, meaning that the road is at 80 percent or more of its capacity at peak traffic hours.²

Type: Outcome

Goal: No stated goal.

Performance:

Over Time: Congestion on major state-maintained highways in urban areas (i.e., interstates, major and minor arteries, and major collector roads) increased from 18 percent in 1990 to 20 percent in 1995. In 1995, the Philadelphia area had the highest percentage of congested roads at 29 percent followed by Harrisburg (23 percent) and Lancaster (21 percent).

**Percentage of Urban Highways Congested
(1995)**

| Urban Area | Percent of Arterial Lane Miles With V/sf>0.8 | |
|-------------------------------|--|------|
| | 1990 | 1995 |
| Philadelphia..... | 25% | 29% |
| Harrisburg | 15% | 23% |
| Lancaster..... | 19% | 21% |
| Pittsburgh | 18% | 19% |
| Lehigh Valley..... | 13% | 17% |
| Scranton-Wilkes-Barre..... | 9% | 10% |
| All Other Urban Areas..... | 7% | 8% |
| Total of All Urban Areas | 18% | 20% |

Source: Compiled from information developed by PennDOT's Bureau of Transportation Systems Performance.

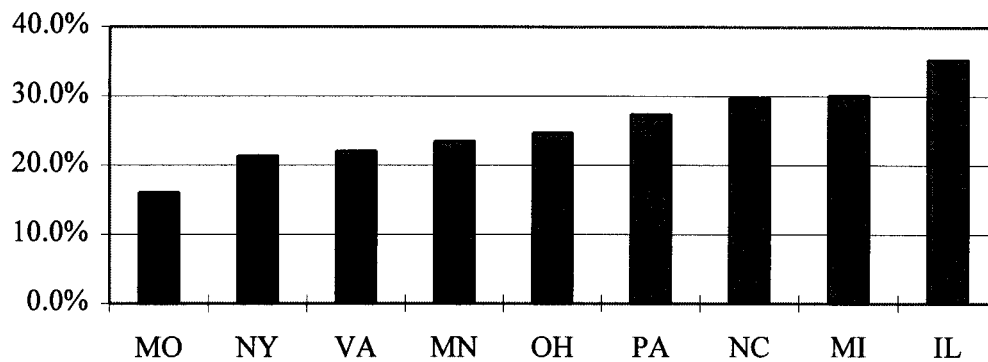
Compared to Peer States: In 1994, Pennsylvania ranked as the third most congested among the nine peer states we reviewed, with 8.8 percent of all major state-maintained highways having a volume to service flow ratio greater than 0.8. Illinois was the most congested at 9.4 percent, and New York was second at 8.9 percent.

¹The Planning deputate is also a primary participant in PennDOT congestion management initiatives.

²The Metropolitan Planning Organizations (MPOs) and the Local Development Districts (LDDs) in Pennsylvania are also developing and using other valid measures of congestion management. These measures vary by organization and include, but are not limited to, levels of service, person hours of delay, average trip time, average speed vs. peak speed, and costs.

As shown below, when only considering urban arterial highways (i.e., urban interstates, principal and minor arteries), Pennsylvania ranked as the fourth most congested among the 9 peer states, with 27.4 percent of urban arterial roads having a volume to service flow ratio greater than 0.8.

**Congestion on Urban Arterial Highways
(1994)**



Source: Developed from the Federal Highway Administration's *Highway Statistics* 1994, Table HM61.

Deputate: **Highway Administration**
 Component: **Vehicle and Truck Safety**

Measure: ***Fatalities and Injuries Per 100 Million Vehicle Miles Traveled***

Description: Traffic fatalities are accident victims, including pedestrians, who die within 30 days of the accident. Injury data includes drivers, passengers, and pedestrians injured as a direct result of a motor vehicle accident. Virtually all fatalities involve speeding, not wearing a seatbelt, and/or alcohol.

Type: Outcome

Goal: Reduce the state fatality rate per 100 million vehicle miles traveled to less than 1.5 by 1997 and to less than 1.4 by the year 2000. (PennDOT did not have stated goals for years prior to 1997.)

Performance: Motor vehicle fatality rates have declined 27 percent from 1989 to 1994; motor vehicle injury rates have declined 22 percent.

Motor Vehicle Fatality and Injury Rates*

| <u>Year</u> | <u># of PA Fatalities</u> | <u>PA Fatality Rate</u> | <u># of PA Injuries</u> | <u>PA Injury Rate</u> |
|-------------|---------------------------|-------------------------|-------------------------|-----------------------|
| 1989..... | 1,877 | 2.2 | 152,589 | 182.0 |
| 1990..... | 1,646 | 1.9 | 142,945 | 166.8 |
| 1991..... | 1,661 | 1.9 | 130,446 | 149.5 |
| 1992..... | 1,545 | 1.7 | 133,114 | 149.2 |
| 1993..... | 1,529 | 1.7 | 131,638 | 145.1 |
| 1994..... | 1,440 | 1.6 | 130,764 | 141.6 |

*Per 100 million vehicle miles traveled.

Source: Developed from the Federal Highway Administration's Highway Statistics.

Primary Causes of Motor Vehicle Fatalities*

| <u>Year</u> | <u># of PA Fatalities</u> | <u>Speeding^a</u> | <u>Unbelted^b</u> | <u>Alcohol</u> |
|-------------|---------------------------|-----------------------------|-----------------------------|----------------|
| 1991..... | 1,661 | 353 | 747 | 684 |
| 1992..... | 1,545 | 261 | 681 | 634 |
| 1993..... | 1,529 | 313 | 624 | 594 |
| 1994..... | 1,440 | 247 | 570 | 523 |
| 1995..... | 1,480 | 321 | 632 | 514 |

*Numbers should not be added since more than one factor may be involved in a vehicle fatality.

^aIncludes fatalities in which vehicles were driving over the posted speed limit or in a police chase.

^bIncludes persons killed who were both known to have seatbelts available and known not to be using them.

Source: Developed from PennDOT's Computerized Accident Record System, Bureau of Highway Safety and Traffic Engineering.

Measure 19

Deputate: **Highway Administration**
Component: **Vehicle and Truck Safety**

Measure: ***Truck-Related Fatalities***

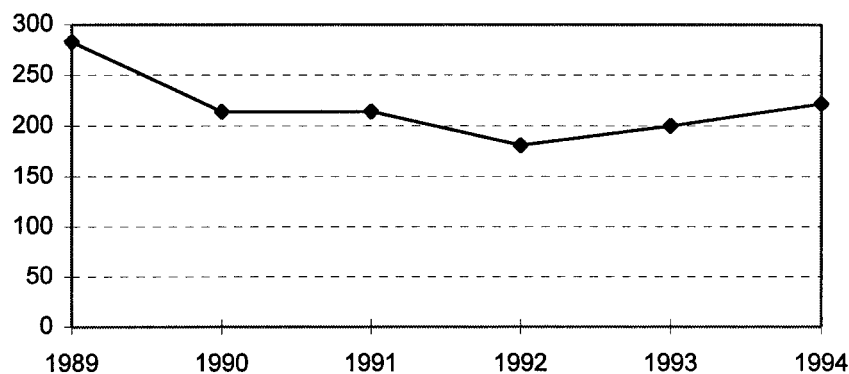
Description: Truck-related fatalities are deaths resulting from accidents involving at least one heavy truck. Light trucks such as jeeps, pickup trucks, tow trucks, and vans are not included in this definition.

Type: Outcome

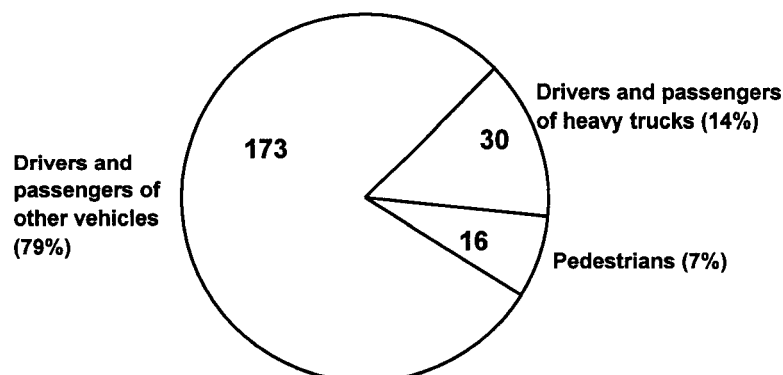
Goal: No stated goals.

Performance: Truck-related fatalities declined between 1989 and 1992, but have been rising since 1992. Most victims are drivers or passengers in the vehicles the trucks crash into.

Truck-Related Fatalities in Pennsylvania



Type of Vehicle Occupied by Victim
(Six Year Average)



Source: Developed from information obtained from PennDOT's Bureau of Highway Safety and Traffic Engineering.

Deputate: **Highway Administration**
 Component: **Vehicle and Truck Safety**

Measure: ***MCSAP Inspections, Trucks Removed From Service, and Fines Levied***

Description: PennDOT administers Pennsylvania's federally funded MCSAP program and, along with the Pennsylvania State Police (PSP) and the Public Utility Commission (PUC), inspects trucks for safety violations. Roadside safety inspections are conducted by trained, uniformed safety inspectors to check if commercial vehicles and drivers are operating consistent with established state and federal safety standards. Unsafe trucks are removed from service until repaired, and the operators are subject to fines.

Type: Output

Goal: No stated goals.

Performance: Pennsylvania State Government enforcement agencies conducted an average of 48,896 MCSAP inspections per year from FY 1989-90 through FY 1994-95. From FY 1989-90 through FY 1994-95, an average of 18,023 trucks were removed from service each year.

MCSAP Inspections by State Enforcement Agency

| <u>FY</u> | <u>1989-90</u> | <u>1990-91</u> | <u>1991-92</u> | <u>1992-93</u> | <u>1993-94</u> | <u>1994-95</u> |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|
| PennDOT..... | 5,970 | 7,839 | 7,592 | 8,898 | 7,880 | 7,979 |
| PSP..... | 26,340 | 29,026 | 22,578 | 18,026 | 13,845 | 20,299 |
| PUC..... | <u>18,898</u> | <u>19,061</u> | <u>19,319</u> | <u>21,238</u> | <u>16,423</u> | <u>22,163</u> |
| Total..... | 51,208 | 55,926 | 49,489 | 48,162 | 38,148 | 50,441 |

Trucks Removed From Service and Fines Levied*

| <u>FY</u> | <u>1989-90</u> | <u>1990-91</u> | <u>1991-92</u> | <u>1992-93</u> | <u>1993-94</u> | <u>1994-95</u> |
|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Trucks Removed .. | 20,435 | 20,577 | 19,128 | 17,241 | 16,387 | 14,372 |
| Total Fines | \$1.35M | \$1.35M | \$1.32M | \$1.33M | \$1.34M | \$1.34M |
| Average Fine | \$66.06 | \$65.61 | \$69.01 | \$77.14 | \$81.77 | \$93.10 |

*PennDOT, PSP, and PUC combined.

Source: Developed from information provided by PennDOT's Bureau of Highway Safety and Traffic Engineering.

Measure 21

Deputate: **Highway Administration**
Component: **Vehicle and Truck Safety**

Measure: ***Hazardous Materials Spills****

Description: Number of accidents and spills in Pennsylvania involving heavy trucks transporting hazardous materials.

Type: Outcome

Goal: No stated goals.

Performance: The number of accidents from 1990 through 1994 averaged 229 per year, ranging from a low of 168 in 1991 to a high of 266 in 1992.

Accidents Involving Heavy Trucks Transporting Hazardous Materials

| | <u>CY 1990</u> | <u>CY 1991</u> | <u>CY 1992</u> | <u>CY 1993</u> | <u>CY 1994</u> |
|---------------------------|----------------|----------------|----------------|----------------|----------------|
| Number of Accidents | 220 | 168 | 266 | 233 | 256 |
| Cargo Status: | | | | | |
| Remained Secure | NA | NA | 218 | 194 | 211 |
| Release Occurred | NA | NA | 37 | 38 | 43 |
| Status Unknown | 220 | 168 | 11 | 1 | 2 |

Source: Developed from information obtained from PennDOT's Bureau of Highway Safety and Traffic Engineering.

*This measure does not totally capture all spills. It captures those which are a result of a reportable traffic accident. Spills, such as those instances when a truck begins to leak without having been involved in an accident, will not be known.

Deputate: **Safety Administration**
 Component: **Telephone Information Center**

Measure: ***Number and Percent of Telephone Center Busyouts***

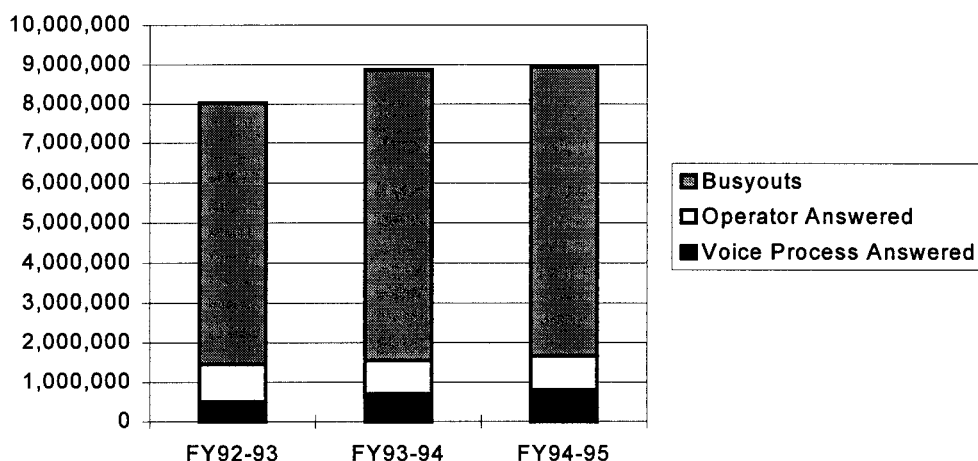
Description: The number and percent of time a caller to the Telephone Information Center's Voice Response System using one of PennDOT's 800 numbers receives a busy signal.¹ Busyouts also include callers who get through to the Voice Processing System, choose the option of speaking to a live operator, but then get a busy signal. Except as noted, these figures do not include busyouts from PennDOT's Automatic Call Distributor (ACD) system, which handles calls from certain telephone lines.

Type: Outcome

Goal: No stated goals.

Performance: From FY 1992-93 through FY 1994-95, the telephone information center averaged about seven million busyouts per year.² As shown below, this means that about four out of five (82 percent) attempts to call the Telephone Center receive a busy signal.

Results of Calls to Telephone Information Center



Source: Developed from PennDOT's Blue Book and information provided by the Office of Safety Administration.

¹Bell Atlantic cannot provide PennDOT data on non-800 numbers. PennDOT expects through privatization to phase out these numbers and thereby be able to track total busyouts more accurately.

²A more comprehensive counting of busyouts, initiated by PennDOT in January 1995, indicates that the actual number of busyouts on the 800 numbers for the most recent twelve month period reported is 11.6 million busyouts per year (the 7.1 million cited above for FY 1994-95 plus an additional 4.5 million through the ACD).

Deputate: **Safety Administration**
Component: **Telephone Information Center**

Measure: ***Time Callers in Queue***

Description: Time in queue is the average length of time callers wait from when a call is answered and put on hold (either directly or after selection through the Voice Processing System) ¹ until the caller speaks to an operator.

Type: Efficiency

Goal: The current goal is to respond to all callers at an average of two minutes or less.² However, it is not possible to measure PennDOT against this goal because the Department only measures the average length of time in queue.³

Performance: The average wait time per caller in queue is at its three year high of 1.86 minutes.

Average Time in Queue (Minutes)

| <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|----------------|----------------|----------------|
| 1.68 | 1.47 | 1.86 |

Source: Developed from information obtained from PennDOT's Bureau of Motor Vehicles, Customer Service Division.

¹The VPS provides answers to commonly asked questions 24 hours a day. If callers want additional information, they continue on to the Automatic Call Distributor (ACD) where, during hours of operator service, they may wait until an operator is available. Wait times may also be incurred by customers calling the ACD directly during hours of operator service.

²PennDOT tightened its maximum wait time target ceiling goal from 5.5 minutes in FY 1989-90 to 4.5 minutes in FYs 1990-91 and 1991-92, to 4 minutes in FY 1992-93, to 2 minutes beginning in FY 1993-94.

³PennDOT reports that with additional staff, wait time was reduced to 1.2 minutes in February and March 1996. PennDOT is requesting its TIC private vendor to keep the maximum wait time at 60 seconds.

Deputate: **Safety Administration**
 Component: **Titling, Registration, Licensing, and Exam Services**

Measure: ***Days to Process Vehicle Titles, Renewal Registrations***

Description: The average number of calendar days to process vehicle titles and new vehicle registrations is tracked from the date of PennDOT receipt to the day after the work was data entered to accommodate next day mailing.

Type: Efficiency

Goal: To process vehicle titles and new registrations within an average of 15 calendar days.

To process renewal registrations within an average of 6 calendar days.

Performance: Although the length of time to process vehicle titles and registrations has been increasing in recent years, all time frames are still well within PennDOT goals.

**Average Calendar Days to Process Vehicle Titles
and New Vehicle Registrations**

| <u>Fiscal Year</u> | <u>Goal^a</u> | <u>Actual^b</u> |
|--------------------|-------------------------|---------------------------|
| FY 1989-90 | 8 | 6.83 |
| FY 1990-91 | 10 | 5.46 |
| FY 1991-92 | 15 | 7.98 |
| FY 1992-93 | 15 | 6.33 |
| FY 1993-94 | 15 | 9.34 |
| FY 1994-95 | 15 | 10.58 |

**Average Calendar Days to Process
Vehicle Renewal Registrations**

| <u>Fiscal Year</u> | <u>Goal</u> | <u>Actual^b</u> |
|--------------------|-------------|---------------------------|
| FY 1989-90..... | 4.5 | 2.0 |
| FY 1990-91..... | 4.5 | 2.4 |
| FY 1991-92..... | 6.0 | 2.1 |
| FY 1992-93..... | 6.0 | 2.0 |
| FY 1993-94..... | 6.0 | 2.5 |
| FY 1994-95..... | 6.0 | 2.9 |

^aIncreasing the stated goals to process titles and registrations was related to decreases in complement levels and increases in volume.

^bIncreases in processing time have been related to equipment downtime. Equipment upgrade is budgeted for FY 1996-97.

Source: Developed from PennDOT's *Management Objectives Report* (Blue Book).

Measure 25

Deputate: **Safety Administration**

Component: **Titling, Registration, Licensing, and Exam Services**

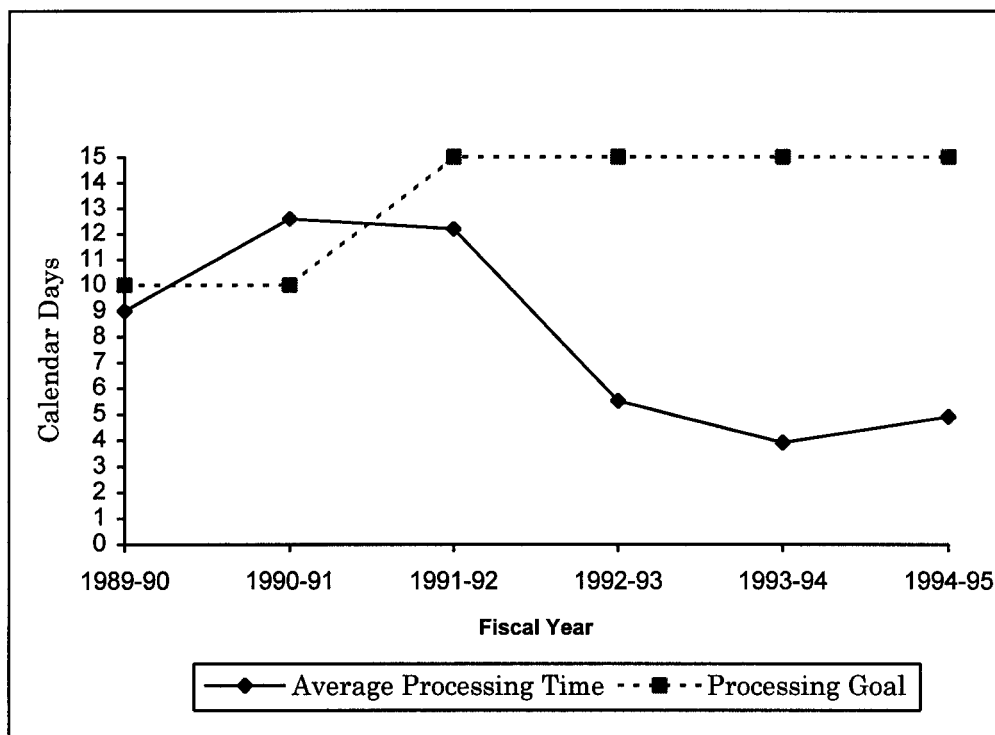
Measure: ***Days to Process Drivers' Licenses***

Description: The average number of calendar days to process new and renewal driver's license applications. The days are measured from the date the application is received in the BDL mail room until the application approval is entered into the BDL computer system, plus one day to accommodate next day mailing.

Type: Outcome

Goal: An average of 15 calendar days.

Performance: Since FY 1992-93, when PennDOT implemented a new driver licensing system, average processing times have been well below the 15 day goal (4.9 days in FY 1994-95).



Source: Developed from PennDOT's Management Objectives Report (Blue Book).

Measure 26

Deputate: **Safety Administration**
 Program: **Titling, Registration, Licensing, and Exam Services**

Measure: ***Number of New and Used Vehicles Titled and Registered and the Number of Renewal Vehicle Registrations Processed Per Employee***

Description: As above.

Type: Output

Goal: No stated goals; Bureau performance standard is 14 units per hour for data input of titling/registration transactions.

Performance: Daily production reports are generated from the Department's computer system for each employee (operator) responsible for inputting registration, licensing, titling, and other information related to a customer's file. These reports measure the amount of time it takes individual operators to complete a particular type of transaction. Various types of transactions, not all of which are related to titling or registration processing, are completed on a daily basis by operators.

PennDOT tracks the daily and monthly level of data entry work that individual operators complete.

Employee Processing Rates

| | <u>FY 1993-94</u> | <u>FY 1994-95</u> |
|--|-------------------|-------------------|
| Renewals Processed | 8.8 million | 8.8 million |
| Renewal Processing Employees ^a | 48 | 45 |
| Renewals Per Employee Per Year | 183,334 | 195,556 |
| New/Used/Car Title/Tax/Registrations Processed | 3.6 million | 3.6 million |
| New/Used/Car Title/Tax/Registrations Employees..... | 232 | 231 |
| New/Used/Car Title/Tax/Registrations Per Employee Per Year | 15,517 | 15,585 |

^aEmployee refers to number of full-time equivalent people who process the forms and includes receiving/depositing, data entry, and output sections.

Source: Developed from information provided by PennDOT's Office of Safety Administration.

Measure 27

Deputate: **Safety Administration**
 Component: **Titling, Registration, Licensing, and Exam Services**

Measure: ***Days to Deposit Checks***

Description: Average elapsed banking days to deposit 100 percent of checks from PennDOT check receipt date to deposit in bank.

Type: Efficiency

Goal: Bureau of Driver Licensing (BDL): Ten banking days; changed to five banking days in July 1995.

Bureau of Motor Vehicles (BMV): No stated goals.

Performance:

Bureau of Driver Licensing: Elapsed time for the deposit of BDL receipts (driver's license renewals, new drivers' licenses) improved markedly since the FY 1989-90 high of 11 calendar days.

| <u>Fiscal Year</u> | <u>Days to Make 100% of Deposit</u> |
|--------------------|---|
| 1989-90 | 11.00 |
| 1990-91 | 10.17 |
| 1991-92 | 4.33 |
| 1992-93 | 2.92 |
| 1993-94 | 3.25 |
| 1994-95 | 3.92 |

Source: PennDOT Bureau of Motor Vehicles.

Bureau of Motor Vehicles: During the period 1990 through 1994, over 97 percent of all BMV receipts were deposited within two banking days.

| <u>Year</u> | <u>Day One</u> | <u>Day Two</u> | <u>Day Three</u> |
|-------------|----------------|----------------|------------------|
| 1990 | 54.4 | 93.6 | 98.3 |
| 1991 | 59.6 | 97.5 | 99.9 |
| 1992 | 59.3 | 97.8 | 100.0 |
| 1993 | 58.4 | 97.7 | 99.8 |
| 1994 | 58.2 | 98.7 | 99.8 |

Source: PennDOT Bureau of Motor Vehicles.

Deputate: **Safety Administration**
 Component: **Titling, Registration, Licensing, and Exam Services**

Measure: ***Employee Error Rates***

Description: Employees in selected production areas are checked at least twice yearly; employees with error rates of 1 percent or more are to be checked quarterly. BMV calculates error rates by taking the total number of entry-capable fields and dividing them by the number of errors detected. (For example, an address consists of five fields: address line 1, address line 2, city, state, and zip code.) Reviews consist of randomly selecting 10 pieces of work from no less than three randomly identified batches (30 in total).

Type: Outcome

Goal: Error rates should be less than 1 percent.

Performance: Overall error rates have improved since 1990 and were below 1 percent for the first three quarters of 1995. However, BMV does not collect data on the percentage of documents that contain an error. Thus, even with an error rate of 0.95 percent, if each of the 1,923 errors were on separate documents (unlikely, but theoretically possible), it would mean that as many as one out of every 3.9 documents could contain an error.¹

BMV Employee Error Rates

| <u>Year</u> | <u>Total # Documents Sampled</u> | <u>Total # Operators Sampled</u> | <u>Total # of Quality Control Items Sampled</u> | <u>Total # of Errors</u> | <u>Final QC Rate</u> |
|-------------------------|----------------------------------|----------------------------------|---|--------------------------|----------------------|
| 1990 | 13,480 | 467 | 320,392 | 4,629 | 1.44 |
| 1991 | 11,160 | 382 | 285,295 | 3,291 | 1.15 |
| 1992 | 10,770 | 364 | 285,182 | 3,164 | 1.11 |
| 1993 | 10,932 | 369 | 293,983 | 3,527 | 1.20 |
| 1994 ^a | 1,840 | 63 | 50,891 | 538 | 1.06 ^b |
| 1995 ^c | 7,590 | 258 | 201,902 | 1,923 | 0.95 ^d |

^aApril-September only. Other data not available.

^bCalculated annualized rate based on actual data from April-September (other quarters not available).

^cJanuary-September only.

^dCalculated annualized rate based on actual data from January-September (other quarter not available).

Source: Developed from the Bureau of Motor Vehicles' quarterly quality inspection reviews.

¹The BMV reported that as of May 1996, it was developing a team to address the measurement of these error rates as part of the Continuing Quality Improvement (CQI) plan. Included for consideration will be the measurement of the percentage of documents that contain an error (customer satisfaction related) in addition to the amount and type of errors (employee performance/training related) committed.

Deputate: **Safety Administration**

Component: **Titling, Registration, Licensing, and Exam Services**

Measure: ***Wait Times at Photo License Centers and Driver Exam Sites***

Description: Length of time in queue at *photo license centers* is measured from the time the customer enters the facility until they receive their photo license.¹ Length of time in queue at *driver exam sites* is measured from the time the customer enters the facility until a customer service representative begins processing their transaction.² Neither measure was tracked prior to July 1995.

Type: Efficiency

Goal: 98 percent of *Photo License Center* customers are to be served within 20 minutes. 90 percent of *Driver Exam Site* customers are to be served within 20 minutes.

Performance: During the period July-November 1995, 97.3 percent of *photo license center* customers received service within 20 minutes of arrival. The percentage of *driver exam site* customers receiving service within 20 minutes averaged 90.1 percent during this same period. PennDOT significantly missed its 90 percent goal in July and August 1995 (average 81.2 percent) but exceeded the goal from September through November 1995.

**Percent of Customers Receiving Services
Within 20 Minutes of Arrival**

| | Photo Centers | | | | Driver Exam Centers | | | |
|------------|---------------|----------------|-------------|----------------|---------------------|----------------|-------------|----------------|
| | <u>East</u> | <u>Central</u> | <u>West</u> | <u>Average</u> | <u>East</u> | <u>Central</u> | <u>West</u> | <u>Average</u> |
| July..... | 98% | 98% | 97% | 97.7% | 68% | 86% | 83% | 79.0% |
| Aug..... | 96 | 96 | 97 | 96.3 | 68 | 92 | 90 | 83.3 |
| Sept. | 97 | 97 | 97 | 97.0 | 89 | 98 | 98 | 95.0 |
| Oct..... | 96 | 98 | 98 | 97.3 | 99 | 99 | 97 | 98.3 |
| Nov..... | 98 | 98 | 98 | 98.0 | 89 | 97 | 98 | 94.7 |
| Avg. | 97.0% | 97.4% | 97.4% | 97.3% | 82.6% | 94.4% | 93.2% | 90.1% |

Source: Developed from information obtained from PennDOT's *Management Objectives Report* (Blue Book).

¹Photo license center wait times are recorded three times daily, at 9:00 a.m., 11:00 a.m.; and 2:00 p.m, at each of the 94 sites. The number of times the wait time exceeds the 20 minute goal is divided by the total number of samples for the month to determine a percentage.

²Driver exam site wait times are tracked at 2:00 p.m. at all sites. The measure is calculated by dividing the number of samples over 20 minutes by the total number of samples.

Deputate: **Local and Area Transportation**
 Component: **Mass Transit**

Measure: ***Public Transit Passengers***

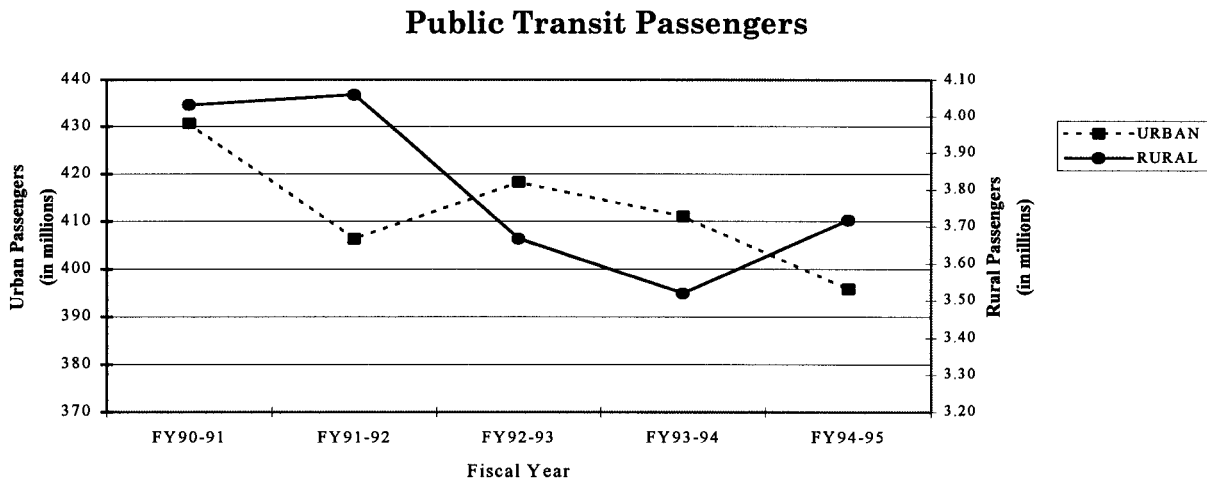
Description: The number of public transit passengers. These transit system statistics are for total passengers (includes senior citizen passengers and third party contract passengers) and transfers. Although PennDOT is not directly responsible for changes in ridership, the Department does have the responsibility to develop programs to foster efficient and effective public transportation services.

Type: Explanatory

Goal: No stated goals.

Performance:

Over Time: Total public transit ridership declined 8 percent in Pennsylvania from FY 1990-91 through FY 1994-95, from 435 million to 399 million. Ridership on urban systems, which comprise about 99 percent of total ridership, also declined by 8 percent. Ridership on rural and small urban systems declined 13 percent from FY 1991-92 to FY 1993-94, but rebounded 5.6 percent in FY 1994-95, for an overall decline for the five years of just under 8 percent. Appendix I contains specific information on each of Pennsylvania's public transit systems.



Source: Developed from information obtained from PennDOT's Bureau of Public Transportation.

Deputate: **Local And Area Transportation**

Component: **Mass Transit**

Measure: ***Federal and State Financial Assistance to Public Transit Systems***

Description: Pennsylvania's public transit systems receive both federal and state funds for operating subsidies and capital grants. Federal funds come from the Federal Transit Administration. State operating subsidies come from the General Fund and for capital expenditures, from both bonds and the Public Transportation Assistance Fund (PTAF), that was enacted in 1991. PTAF revenue is derived from a \$1 per tire fee on the sale of tires, a portion of the public utility realty tax, a tax on motor vehicle leases and rentals, a portion of the Pennsylvania sales and use tax, and interest. Certain entities and transactions are exempt from these taxes and fees.

Type: Input

Goal: No stated goals.

Performance:

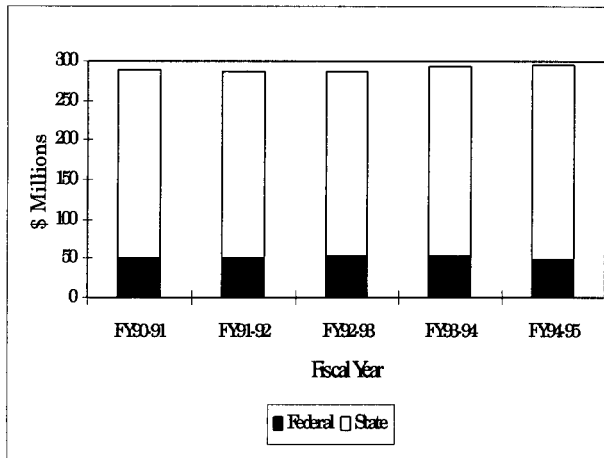
Over Time: Pennsylvania state operating subsidies to transit systems have stayed fairly constant in recent years, at about \$239 million. State capital grants, however, increased 180 percent from \$88 million in FY1990-91 to \$248 million in FY 1994-95 primarily due to the infusion, beginning in FY 1991-92, of an average of \$150 million annually from the Public Transportation Assistance Fund (Act 1991-26).

Both federal mass transit operating subsidies and mass transit capital project grants declined 7 percent and 8 percent respectively from FY 1993-94 to FY 1994-95. The decline in federal grants was more than offset by an increase of 3 percent in state operating subsidies and an 8 percent increase in state capital grants from FY 1993-94 to FY 1994-95.

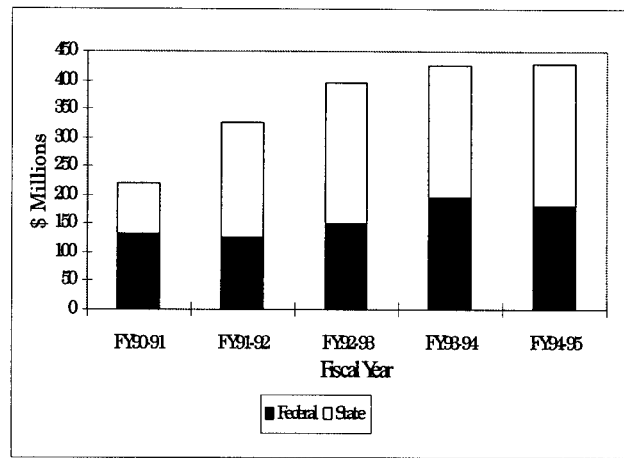
For FY 1994-95, SEPTA, the fourth largest public transportation system in the nation, received 72 percent of all state funding and 63 percent of all federal mass transit funding for Pennsylvania.

See Appendix I for specific information on each of Pennsylvania's public transit systems.

**State and Federal Operating Subsidies,
FY 1990-91 through FY 1994-95**



**State and Federal Capital Grants,
FY 1990-91 through FY 1994-95**



**State and Federal Subsidies and Grants, FY 1994-95
(\$ Millions)**

| | <u>Operating Subsidies</u> | <u>Capital Grants</u> | <u>Totals</u> |
|----------------------------|----------------------------|-----------------------|---------------|
| State: | | | |
| SEPTA..... | \$171.5 | \$186.1 | \$357.5 |
| PAT..... | 62.0 | 46.8 | 108.8 |
| Other Urban | 11.3 | 9.4 | 20.7 |
| Rural and Small Urban..... | <u>2.3</u> | <u>5.2</u> | <u>7.5</u> |
| Subtotal..... | \$247.0 | \$247.5 | \$494.5 |
| Federal: | | | |
| SEPTA..... | \$ 24.1 | \$120.3 | \$144.4 |
| PAT..... | 7.7 | 52.6 | 60.3 |
| Other Urban | 12.7 | 8.6 | 21.4 |
| Rural and Small Urban..... | <u>4.2</u> | <u>0.01</u> | <u>4.2</u> |
| Subtotal..... | \$ 48.8 | \$181.5 | \$230.3 |
| Total | \$295.8 | \$429.0 | \$724.8 |

Source: Developed from information obtained from PennDOT's Bureau of Public Transportation.

Deputate: **Local and Area Transportation**
 Component: **Mass Transit**

Measure: ***Public Transit System Operating Ratios***

Description: The operating ratios (operating revenues/operating expenditures) of Pennsylvania public transit operators. Operating revenues are the total revenue earned by a local transportation organization or company through its transit operations, including, but not limited to, passenger revenue, senior citizen grants, charter revenue, school contract revenue, advertising and other revenue listed in the most recently issued transit statistical reports published by PennDOT. Operating expenses include personnel, fuel, and maintenance. Ratios below 1 indicate the transit system is operating at a loss. Transit operators use federal, state, and local subsidies and other sources of revenue to cover operating losses. PennDOT is not directly responsible for operating ratios, but it does have the responsibility to foster efficient and effective public transportation services.

Type: Outcome

Goal: Act 1991-26 established standards for Class 1 systems (SEPTA) of 0.50 and for Class 2 systems (PAT) of 0.46.

Performance: As shown below, Pennsylvania's 21 urban systems recover about half of their operating expenditures from their operating revenues, while the 21 rural and small urban systems recover slightly more than 30 percent of their operating expenses with operating revenues.

PAT, in particular, has been experiencing a declining operating ratio over the past several years. Operating ratios for the other urban systems and for the rural operators as a group, have remained fairly constant.

See Appendix I for the operating ratio for each of Pennsylvania's public transit systems.

Pennsylvania Transit System Operating Ratios

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|-------------------------|----------------|----------------|----------------|----------------|----------------|
| All Urban Systems | 0.54 | 0.49 | 0.47 | 0.48 | 0.47 |
| SEPTA | 0.55 | 0.49 | 0.47 | 0.49 | 0.50 |
| PAT | 0.51 | 0.49 | 0.43 | 0.43 | 0.39 |
| Other Urban | 0.48 | 0.48 | 0.47 | 0.48 | 0.49 |
| All Rural | 0.37 | 0.36 | 0.34 | 0.34 | 0.33 |

Source: Developed from information provided by PennDOT's Bureau of Public Transportation.

Deputate: **Local and Area Transportation**
 Component: **Mass Transit**

Measure: ***Operating Grants Per Public Transit Passenger***

Description: State and federal operating grants combined divided by the number of total transit passengers. These transit system statistics are for revenue passengers (includes senior citizen passengers and third party contract passengers) and transfers.

Type: Efficiency

Goal: No stated goals.

Performance:

Over Time: Between FY 1990-91 and FY 1994-95, state operating subsidies per passenger to urban transit operators increased 13 percent while federal dollars per passenger only rose 1 percent. During this same time, state operating subsidies per passenger to rural and small urban transit operators increased 11 percent while federal dollars per passenger increased 34 percent. The combined state and federal operating subsidy per passenger increased 7 percent during the last five fiscal years, from 66¢ to 74¢ per passenger. See Appendix I for specific information on each of Pennsylvania's public transit systems.

Operating Subsidies per Passenger
 (Urban and Rural Systems Combined)

| | <u>State</u> | <u>Federal</u> | <u>Total</u> |
|-----------------|--------------|----------------|--------------|
| FY 1990-91..... | \$0.55 | \$0.12 | \$0.66 |
| FY 1991-92..... | 0.57 | 0.13 | 0.70 |
| FY 1992-93..... | 0.56 | 0.12 | 0.68 |
| FY 1993-94..... | 0.58 | 0.13 | 0.71 |
| FY 1994-95..... | 0.62 | 0.12 | 0.74 |

Source: Developed from information obtained from PennDOT's Bureau of Public Transportation.

As shown on the following page, the FY 1993-94 combined grant per passenger in Pennsylvania, 71¢, is only one cent more than the grant per passenger for urban systems (70¢) despite a \$1.76 grant per passenger for rural and small urban systems. This is because rural ridership comprises only about 1 percent of all ridership.

Compared to Peer States: Pennsylvania's combined federal and state grant per passenger for urban and rural systems combined ranked third among peer states behind Michigan and Missouri. Michigan, Missouri, and Virginia each had a higher urban system grant per passenger than Pennsylvania.

**Public Transit Operating Subsidy Per Passenger
(FY 1993-94)**

| | Urban | | | Rural | | | Combined | | |
|-----------------------------|--------------|----------------|--------------|--------------|----------------|--------------|--------------|----------------|--------------|
| | <u>State</u> | <u>Federal</u> | <u>Total</u> | <u>State</u> | <u>Federal</u> | <u>Total</u> | <u>State</u> | <u>Federal</u> | <u>Total</u> |
| Michigan | \$1.02 | \$0.34 | \$1.36 | \$1.94 | \$0.49 | \$2.43 | \$1.07 | \$0.35 | \$1.43 |
| Missouri | 0.00 | 0.74 | 0.74 | 0.00 | 1.79 | 1.79 | 0.00 | 1.15 | 1.15 |
| Pennsylvania | 0.58 | 0.12 | 0.70 | 0.66 | 1.11 | 1.76 | 0.58 | 0.13 | 0.71 |
| Virginia | 0.66 | 0.15 | 0.80 | 0.41 | 0.53 | 0.94 | 0.65 | 0.03 | 0.68 |
| Minnesota | 0.44 | 0.16 | 0.60 | 0.78 | 0.21 | 1.00 | 0.47 | 0.16 | 0.63 |
| North Carolina | 0.09 | 0.33 | 0.42 | 0.17 | 0.82 | 0.98 | 0.10 | 0.36 | 0.46 |
| Ohio | 0.15 | 0.23 | 0.39 | 1.55 | 1.38 | 2.92 | 0.18 | 0.25 | 0.43 |
| Illinois ^a | 0.24 | 0.10 | 0.34 | 0.39 | 2.68 | 3.07 | 0.24 | 0.10 | 0.34 |
| New York ^b | 0.74 | NA | NA | 0.26 | NA | NA | 0.74 | NA | NA |

^aIllinois data is for FY 1992-93.

^bInsufficient data to calculate for New York.

Source: Developed from information obtained from PennDOT's Bureau of Public Transportation and the selected other states.

Deputate: **Local and Area Transportation**

Component: **Mass Transit**

Measures: ***Free Transit and Shared Ride Grants, Passengers, and Cost Per Passenger¹***

Description: The Free Transit Program, funded through the State Lottery and the General Fund, provides for free transit to persons 65 and older on participating transit systems during non-peak hours. Since July 1, 1981, the State Lottery's Shared Ride Program has allowed citizens 65 and older to use shared ride, demand-responsive (normally door-to-door) services and pay only a small percentage of the regular fare. Both programs are administered by PennDOT.

Type: Input (grants and passengers)
Efficiency (cost per passenger)

Goal: No stated goals.

Performance: State funding for the Free Transit Program has declined in recent years whereas funding for the Shared Ride Program has been increasing.

Free Transit and Shared Ride Program Grants*

| | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|--|---------------------|----------------------|----------------------|----------------------|
| Urban Systems | | | | |
| Free Transit: | | | | |
| SEPTA | \$56,844,001 | \$ 55,668,069 | \$ 53,774,900 | \$ 53,496,297 |
| PAT | 14,798,229 | 14,716,891 | 13,051,772 | 12,896,727 |
| Other Urban..... | <u>7,402,621</u> | <u>7,024,784</u> | <u>6,825,126</u> | <u>6,919,236</u> |
| Free Transit Total..... | \$79,044,851 | \$ 77,110,744 | \$ 73,651,798 | \$ 73,312,260 |
| Shared Ride: | | | | |
| SEPTA | \$ 0 ^a | \$ 5,167,217 | \$ 12,102,670 | \$ 12,333,931 |
| PAT | 12,075,214 | 11,406,000 | 11,427,412 | 11,902,933 |
| Other Urban..... | <u>2,118,381</u> | <u>2,800,450</u> | <u>2,709,166</u> | <u>2,867,303</u> |
| Shared Ride Total..... | \$14,193,595 | \$ 19,373,667 | \$ 26,239,248 | \$ 27,104,167 |
| Subtotal - Urban Systems | \$93,238,446 | \$ 96,484,411 | \$ 99,891,046 | \$100,416,427 |
| Rural Systems | | | | |
| Free Transit Total..... | \$ 1,574,451 | \$ 1,555,826 | \$ 1,547,341 | \$ 1,563,051 |
| Shared Ride Total..... | <u>475,952</u> | <u>466,662</u> | <u>479,058</u> | <u>408,375</u> |
| Subtotal - Rural Systems | \$ 2,050,403 | \$ 2,022,488 | \$ 2,026,399 | \$ 1,971,426 |
| Total - Urban & Rural | \$95,288,849 | \$ 98,506,899 | \$101,917,445 | \$102,387,853 |

*See Appendix I for specific information on each of Pennsylvania's public transit systems.

^aDuring FY91-92, only five urban transit agencies provided service under the Shared Ride Program: PAT (Pittsburgh), BARTA (Berks Area-Reading), BCTA (Beaver County), CATA (Centre Area), and LANTA (Lehigh and Northampton).

¹Data reported are only for public transit systems included in the *Pennsylvania Urban Transit Statistical Report* and the *Pennsylvania Rural and Small Urban Public Transportation Program Statistical Report*, which do not comprise the total for the state.

Note: The numbers presented below only include services provided by public transit agencies; they do not represent total senior citizen ridership for the Free Transit and Shared Ride Programs. For instance, although SEPTA received no Shared Ride service prior to FY 1992-93, this service was provided by other transportation operators.

Free Transit and Shared Ride Passengers

| | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|--|-------------------|-------------------|-------------------|-------------------|
| Urban Systems | | | | |
| Free Transit: | | | | |
| SEPTA..... | 39,049,281 | 37,980,676 | 36,535,747 | 35,370,015 |
| PAT..... | 12,255,480 | 12,029,945 | 10,805,278 | 10,675,565 |
| Other Urban..... | <u>7,931,522</u> | <u>7,278,851</u> | <u>6,509,349</u> | <u>6,369,766</u> |
| Free Transit Total..... | 59,236,283 | 57,289,472 | 53,850,374 | 52,415,346 |
| Shared Ride: | | | | |
| SEPTA..... | 0 | 438,622 | 727,518 | 816,384 |
| PAT..... | 1,582,971 | 1,460,891 | 1,401,679 | 1,447,643 |
| Other Urban..... | <u>378,341</u> | <u>549,262</u> | <u>501,154</u> | <u>525,043</u> |
| Shared Ride Total..... | 1,961,312 | 2,448,775 | 2,630,351 | 2,789,070 |
| Subtotal - Urban Systems ... | 61,197,595 | 59,738,247 | 56,480,725 | 55,204,416 |
| Rural Systems | | | | |
| Free Transit Total..... | 1,861,253 | 1,754,353 | 1,624,756 | 1,720,370 |
| Shared Ride Total..... | <u>179,256</u> | <u>176,231</u> | <u>162,950</u> | <u>140,756</u> |
| Subtotal - Rural Systems | 2,040,509 | 1,930,584 | 1,787,706 | 1,861,126 |
| Total - Urban & Rural | 63,238,104 | 61,668,831 | 58,268,431 | 57,065,542 |

Free Transit and Shared Ride Grants Per Passenger

| | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|------------------------------|----------------|----------------|----------------|----------------|
| Urban Systems | | | | |
| Free Transit: | | | | |
| SEPTA..... | \$1.46 | \$1.47 | \$1.47 | \$1.51 |
| PAT..... | 1.21 | 1.20 | 1.21 | 1.21 |
| Other Urban..... | 0.93 | 0.97 | 1.05 | 1.09 |
| Shared Ride: | | | | |
| SEPTA..... | 0 | 11.78 | 16.64 | 15.11 |
| PAT..... | 7.63 | 7.81 | 8.15 | 8.22 |
| Other Urban..... | 5.60 | 5.10 | 5.41 | 5.46 |
| Rural Systems | | | | |
| Free Transit..... | 0.85 | 0.89 | 0.95 | 0.91 |
| Shared Ride..... | 2.66 | 2.65 | 2.94 | 2.90 |
| Free Transit Avg..... | \$1.32 | \$1.33 | \$1.36 | \$1.38 |
| Shared Ride Avg..... | \$6.85 | \$7.56 | \$9.57 | \$9.39 |

Source: All tables developed from information obtained from PennDOT's Bureau of Public Transportation.

Deputate: **Local and Area Transportation**

Component: **Road Turnback**

Measure: ***Roads Turned Back to Local Governments and Monies Expended***

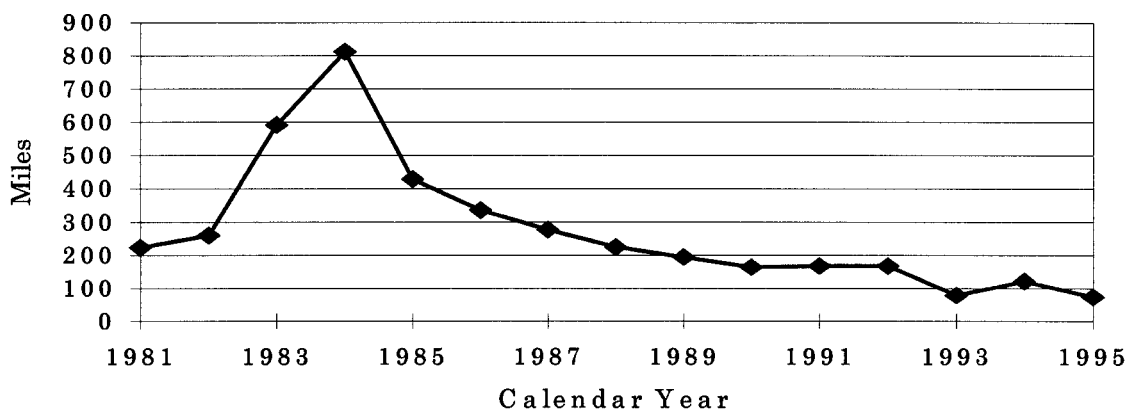
Description: In 1980 the Commonwealth owned and maintained more than 45,000 miles of highway. It was determined that certain highways (approximately 12,100 miles) could be better maintained at the local level than at the state level. Act 1981-81 simplified the mechanism for turning back roads to municipalities and Act 1983-32 dedicated funding to the program from the Motor License Fund which provides an annual maintenance payment to municipalities of \$2,500 per mile for turned back roads and also pays restoration costs prior to their transfer.

Type: Outcome

Goal: Return the remaining 8,000 miles of functionally-local roads to municipalities.

Performance: As can be seen from the graph, the number of miles turned back has decreased from a high in 1984 of 813 miles to the 74 miles in 1995. Total annual program costs have stayed at about \$15 million; however, as the number of miles of roads receiving annual maintenance payments has increased, the remaining money available for restoration has decreased.

Miles of Road Turned Back by Calendar Year



Road Turnback Program Expenditures
(In Millions)

| <u>Fiscal Year</u> | <u>Total Expenditures</u> | <u>Maintenance Expenditures</u> | <u>Restoration Expenditures</u> | <u>Restoration Cost Per Mile</u> |
|--------------------|---------------------------|---------------------------------|---------------------------------|----------------------------------|
| FY90-91..... | 13.5 | 8.1 | 5.4 | 0.031 |
| FY91-92..... | 15.1 | 8.4 | 6.7 | 0.049 |
| FY92-93..... | 16.8 | 8.9 | 7.9 | 0.053 |
| FY93-94..... | 14.6 | 9.3 | 5.3 | 0.051 |
| FY94-95..... | 15.8 | 9.4 | 6.4 | 0.080 |

Source: Developed from information obtained from PennDOT.

Deputate: **Aviation and Rail Freight**

Component: **Aviation**

Measure: ***Federal and State Grants to Airports***

Description: Licensed public-use airports can receive state aviation development grants for projects such as runway/taxiway/apron construction, lighting, land acquisition, and planning. State taxiway and runway rehabilitation grants are used only for crack sealing, patching, and seal coating runways, taxiways, and aprons. State grants to the Philadelphia International Airport and the Pittsburgh International Airport are capped at \$800,000 each. These grants are funded through a tax assessed on aviation gasoline and jet fuel. PennDOT's grant award priority is: (1) federal match requirements, (2) business service airports, and (3) general service facilities. Public-use airports are also eligible each year for a state grant equal to the amount of the local real estate tax assessed on the aviation-related areas of airport property.

The Airport Improvement Program (AIP) is administered by the Federal Aviation Administration (FAA). Local airports, in conjunction with local and state planning agencies, identify their annual capital improvement needs and submit proposals to the FAA. The U.S. Congress establishes national AIP goals, funding categories, and program limitations.

Pennsylvania state government also provides airport development loans through the Department of Commerce.

Type: Input

Goal: Act 1984-164 authorizes PennDOT to encourage and assist in the establishment and construction of airports.

Performance: Total state and federal grant funding for aviation has decreased 28 percent between FY 1990-91 and FY 1994-95. An average of 56 public-use airports received state aviation development grants averaging \$102,000 per year. An average of 13 airports received state taxiway and runway rehabilitation grants averaging \$38,500 per year. An average of 33 airports received state reimbursement grants for local real estate taxes assessed on them averaging \$5,000 per year.

Federal and State Government Grants to Airports

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|---------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Development | \$6,197,372 | \$5,530,660 | \$5,545,965 | \$5,837,505 | \$5,639,726 |
| # of Recipients | 55 | 60 | 51 | 63 | 53 |
| Taxi/Runway | \$ 493,532 | \$ 498,862 | \$ 441,291 | \$ 539,708 | \$ 527,357 |
| # of Recipients | 11 | 14 | 15 | 14 | 11 |
| Real Estate Tax Reimb | \$ 122,124 | \$ 146,352 | \$ 154,828 | \$ 157,756 | \$ 206,887 |
| # of Recipients | 28 | 33 | 35 | 33 | 37 |
| Total State Grants | \$ 6,813,028 | \$ 6,175,874 | \$ 6,142,084 | \$ 6,534,969 | \$ 6,373,970 |
| Federal AIP Grants..... | <u>\$68,197,590</u> | <u>\$65,076,784</u> | <u>\$62,791,192</u> | <u>\$55,800,273</u> | <u>\$47,866,966</u> |
| Total All Grants | \$75,010,618 | \$71,252,658 | \$68,933,276 | \$62,335,242 | \$54,240,936 |
| Airport Dev. Loans ^a | \$20,098,000 | \$ 4,116,741 | \$ 885,000 | \$ 6,687,210 | \$10,900,000 |

^aBond finance projects as a Mass Transit category; airports do not have to repay these loans. Debt service is paid by the Commonwealth.

Source: Developed from information obtained from PennDOT's Bureau of Aviation.

Deputate: **Aviation and Rail Freight**
 Component: **Aviation**

Measure: ***Revenue to Expense Ratios for State-Owned Airports***

Description: The airport revenues (which include items such as rents, fees, and charges which are not direct reimbursement for an expense) to expenses (which include the day to day operating expenses, personnel costs, and fixed assets) for each of the three state-owned airports. A ratio greater than 1 means that the airport is operating at a "profit," a ratio of less than 1 means the airport is operating at a loss. Reimbursable expenses not included as airport revenues are utility expenses paid by the Commonwealth and invoiced to tenants/users, federal and state grants and reimbursements, and insurance claim payments.

Type: Efficiency

Goal: Operate and maintain state-owned airports in accordance with Act 1984-164.

Performance: PennDOT operates, either directly or through contracts, three airports: Harrisburg International (HIA), Capital City (CCA), and Grand Canyon (GCA). As shown below, HIA generates a profit, while Capital City operates at a loss of about \$500,000 annually. Grand Canyon generally operates at a loss, but was profitable in FY 1994-95.

State-Owned Airport Revenues and Expenses
 (\$000)

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|--|----------------|----------------|----------------|----------------|----------------|
| <i>Harrisburg International Airport</i> | | | | | |
| Revenues..... | \$9,116 | \$10,780 | \$8,504 | \$11,774 | \$10,469 |
| Expenses..... | 7,729 | 8,499 | 7,506 | 8,230 | 8,355 |
| Profit (Loss)..... | \$1,387 | \$ 2,281 | \$ 998 | \$ 3,544 | \$ 2,114 |
| Revenues/Expenses..... | 1.18 | 1.27 | 1.13 | 1.43 | 1.25 |
| <i>Capital City Airport</i> | | | | | |
| Revenues..... | \$ 896 | \$ 835 | \$ 956 | \$ 187 | \$ 799 |
| Expenses..... | 1,388 | 1,290 | 1,417 | 764 | 1,374 |
| Profit (Loss)..... | (\$ 492) | (\$ 455) | (\$ 461) | (\$ 577) | (\$ 575) |
| Revenues/Expenses..... | 0.65 | 0.65 | 0.68 | 0.25 | 0.58 |
| <i>Grand Canyon Airport</i> | | | | | |
| Revenues..... | \$ 34 | \$ 3 | \$ 130 | \$ 317 | \$1,150 |
| Expenses..... | 35 | 78 | 147 | 489 | 1,103 |
| Profit (Loss)..... | (\$ 1) | (\$ 75) | (\$ 17) | (\$ 172) | \$ 47 |
| Revenues/Expenses..... | 0.97 | 0.38 | 0.88 | 0.65 | 1.04 |
| <i>All State-Owned Airports</i> | | | | | |
| Revenues..... | \$10,046 | \$11,618 | \$9,590 | \$12,278 | \$12,418 |
| Expenses..... | 9,152 | 9,867 | 9,070 | 9,483 | 10,832 |
| Profit (Loss)..... | \$ 894 | \$ 1,751 | \$ 520 | \$ 2,795 | \$ 1,586 |

Source: Developed from information obtained from PennDOT's Bureau of Aviation.

Deputate: **Aviation and Rail Freight**
 Component: **Aviation**

Measure: ***Airport Safety Inspections***

Description: The number of safety inspections of Pennsylvania's licensed airports conducted annually. Airport safety inspections do not result in a pass/fail grade, but PennDOT has the authority to suspend and/or revoke a license if a safety concern is deemed severe enough. The Federal Aviation Administration reimburses PennDOT for the cost of public-use airport safety inspections.

Type: Output

Goal: Inspect all public-use airports annually.

Performance: PennDOT reported 835 airports/heliports in Pennsylvania as of October 1995--150 public-use and 685 privately owned.

There is no federal or Commonwealth requirement that state government conduct airport safety inspections. However, all Pennsylvania airports are inspected as part of their initial licensing process and public-use airports are then inspected annually. Private airports are inspected when initially licensed, but thereafter are inspected on an exception basis, normally when PennDOT is notified of a potential problem.

During the past five years, PennDOT has inspected an average of 5 percent of Pennsylvania's private airports each year.

Number of Airports Inspected

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|---------------|----------------|----------------|----------------|----------------|----------------|
| Public..... | 155 | 151 | 151 | 149 | 149 |
| Private | <u>25</u> | <u>23</u> | <u>42</u> | <u>31</u> | <u>42</u> |
| Total..... | 180 | 174 | 193 | 180 | 191 |

Source: Information provided by PennDOT's Bureau of Aviation.

Deputate: **Aviation and Rail Freight**
 Component: **Rail Freight**

Measure: ***Federal and State Grants Awarded to Rail Freight Operators***

Description: Under PennDOT's Rail Freight Assistance Program (RFAP), rail freight operators are eligible for two state General Fund matching grants-- maintenance/rehabilitation grants (maximum award is \$250,000 or no greater than 75 percent of the project cost, whichever is less) and construction grants (maximum award is \$100,000 or no greater than 50 percent of the total project cost; whichever is less). Construction projects exceeding \$100,000 may also be eligible for funding through the state capital budget authorization process.

Type: Input

Goal: No stated goals.

Performance: Over the past five fiscal years, PennDOT has provided RFAP matching grants to an average of 38 rail freight providers and users. These grants have ranged from a high of \$3.6 million in FY 1990-91 to a low of \$2.5 million in FY 1991-92. The Department has not lapsed any of these funds.

Capital investments in rail freight were up dramatically in FY 1993-94 and FY 1994-95, due largely (\$32 million of the five-year \$64 million total) to grants to Conrail and the Delaware and Hudson Railway to convert railways to accept double-stacked freight cars.

Operating and Capital Grants to Rail Freight Operators
 (\$ Millions)

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| Federal Grants: | \$ 0.5 | \$0.3 | \$0.4 | \$ 0.9 | \$ 1.2 |
| State Grants | <u>16.9</u> | <u>7.3</u> | <u>7.5</u> | <u>15.0</u> | <u>32.2</u> |
| Total - Grants | \$17.4 | \$7.6 | \$7.9 | \$15.9 | \$33.4 |
| RFAP | \$ 3.6 | \$2.5 | \$2.6 | \$ 3.6 | \$ 2.6 |
| Capital..... | \$13.3 | \$4.8 | \$4.9 | \$11.4 | \$29.6 |
| # of State Grant | | | | | |
| Recipients..... | 33 | 38 | 36 | 39 | 46 |

Source: Information provided by PennDOT's Bureau of Rail Freight, Ports and Waterways.

Deputate: **Aviation and Rail Freight**
Component: **Rail Freight**

Measure: ***Miles of State-Owned Short Line Track***

Description: PennDOT purchased rail lines abandoned by Conrail and CSX to preserve rail freight service for businesses that depend on such service to survive. PennDOT owns but does not operate lines; there are currently 11 operators under contract with PennDOT to operate these lines.¹

Type: Outcome

Goal: No stated goals.

Performance: The number of miles of active short-line railroad track owned by the Commonwealth has decreased by approximately one-third during the last five fiscal years.

Miles of Railroad Track Owned by Pennsylvania

| <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|----------------|----------------|----------------|----------------|----------------|
| 154.7 | 135.6 | 112.3 | 109.1 | 104.8 |

Source: Information provided by PennDOT's Bureau of Rail Freight, Ports and Waterways.

¹The Commonwealth considers purchasing rail lines for ownership only if no other alternative is feasible and it is determined that the operation of the line is desirable from an economic development perspective.

Deputate: **Executive Office, Administration, Planning**

Component: **Financial Management**

Measure: ***Ratio of Pennsylvania's Federal Highway Trust Fund Apportionments to Payments Into the Fund***

Description: Pennsylvania receives money for surface transportation from the Federal Highway Trust Fund, which is funded through various excise taxes. Ratios over 1 indicate that Pennsylvania receives more from the Fund than it pays into it. The figures exclude apportionments and payments for mass transit because these apportionments are not consistently identified in the federal statistics used for this measure.

Type: Explanatory

Goal: No stated goal.

Performance: Pennsylvania's ratio has ranged from .86 in 1989 to 1.64 in 1994. Among selected peer states, Pennsylvania's return (1.64) ranked the highest in CY 1994 and was among the top three states each calendar year from 1990 to 1994.

**Ratio of Federal Highway Trust Fund Apportionments to Payments
Pennsylvania (\$000)**

| <u>CY</u> | <u>Payments Into Highway Account</u> | <u>Apportionments From the Fund (Highway Account Only)</u> | <u>Ratio of Apportionments to Payments</u> |
|-----------|--|--|--|
| 1989..... | \$651,495 | \$ 561,113 | .86 |
| 1990..... | 539,602 | 541,506 | 1.00 |
| 1991..... | 628,376 | 553,604 | .88 |
| 1992..... | 689,882 | 805,011 | 1.17 |
| 1993..... | 697,688 | 916,227 | 1.31 |
| 1994..... | 635,428 | 1,042,792 | 1.64 |

Peer States: CY 1994 (\$000)

| | <u>Highway Payments Into the Fund</u> | <u>Apportionments From the Fund (Highway Account Only)</u> | <u>Ratio of Apportionments to Payments</u> |
|---------|---|--|--|
| PA..... | \$635,428 | \$1,042,792 | 1.64 |
| NY..... | 658,943 | 1,029,612 | 1.56 |
| IL..... | 572,144 | 769,367 | 1.34 |
| VA..... | 402,885 | 534,322 | 1.33 |
| OH..... | 582,104 | 690,176 | 1.19 |
| MN..... | 240,008 | 276,782 | 1.15 |
| NC..... | 437,162 | 501,052 | 1.15 |
| MI..... | 516,125 | 584,226 | 1.13 |
| MO..... | 378,735 | 393,724 | 1.04 |

Source: Developed from *Highway Statistics, 1989-1994*, Federal Highway Administration.

Deputate: **Executive Office, Administration, Planning**
 Component: **Financial Management**

Measure: **Motor License Fund Expenditures**

Description: Motor License Fund (MLF) expenditures from state funds, federal funds, restricted revenues, and augmentations. MLF expenditures by program.

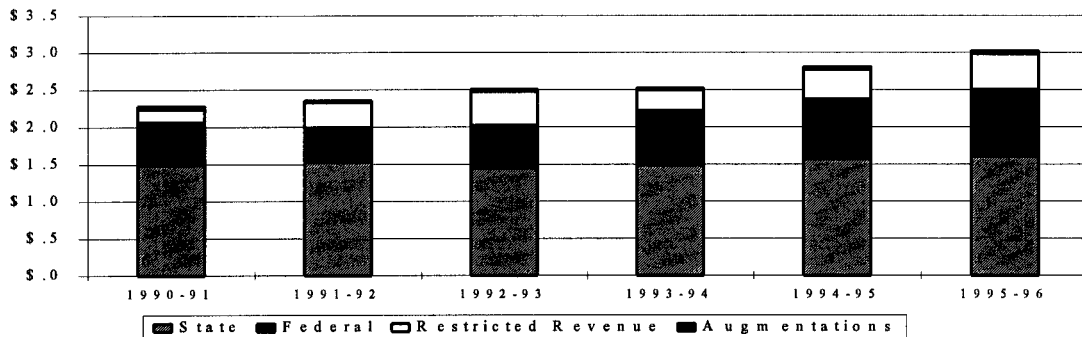
Type: Input

Goal: No stated goal.

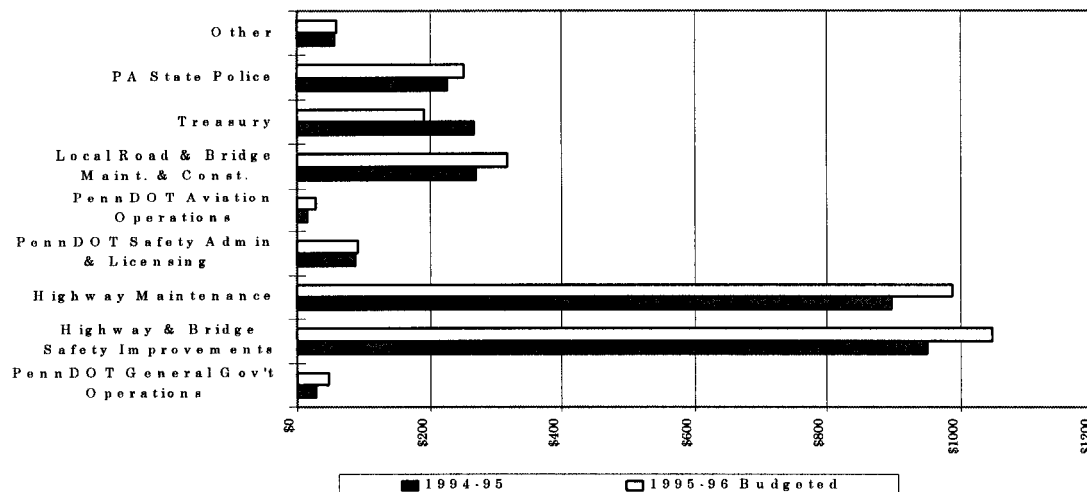
Performance: From FY 1990-91 through FY 1995-96, MLF expenditures have increased from \$2.3 billion to \$3.0 billion (available), a 32.6 percent increase. The largest increase in expenditures, 172.0 percent, is from restricted funds. Expenditures from state funds are relatively flat with an 8.1 percent increase.

Expenditures for Highway Maintenance and Highway and Bridge Safety Improvements were 64.6 percent of total MLF expenditures in FY 1990-91 and increased to 67.4 percent in FY 1995-96.

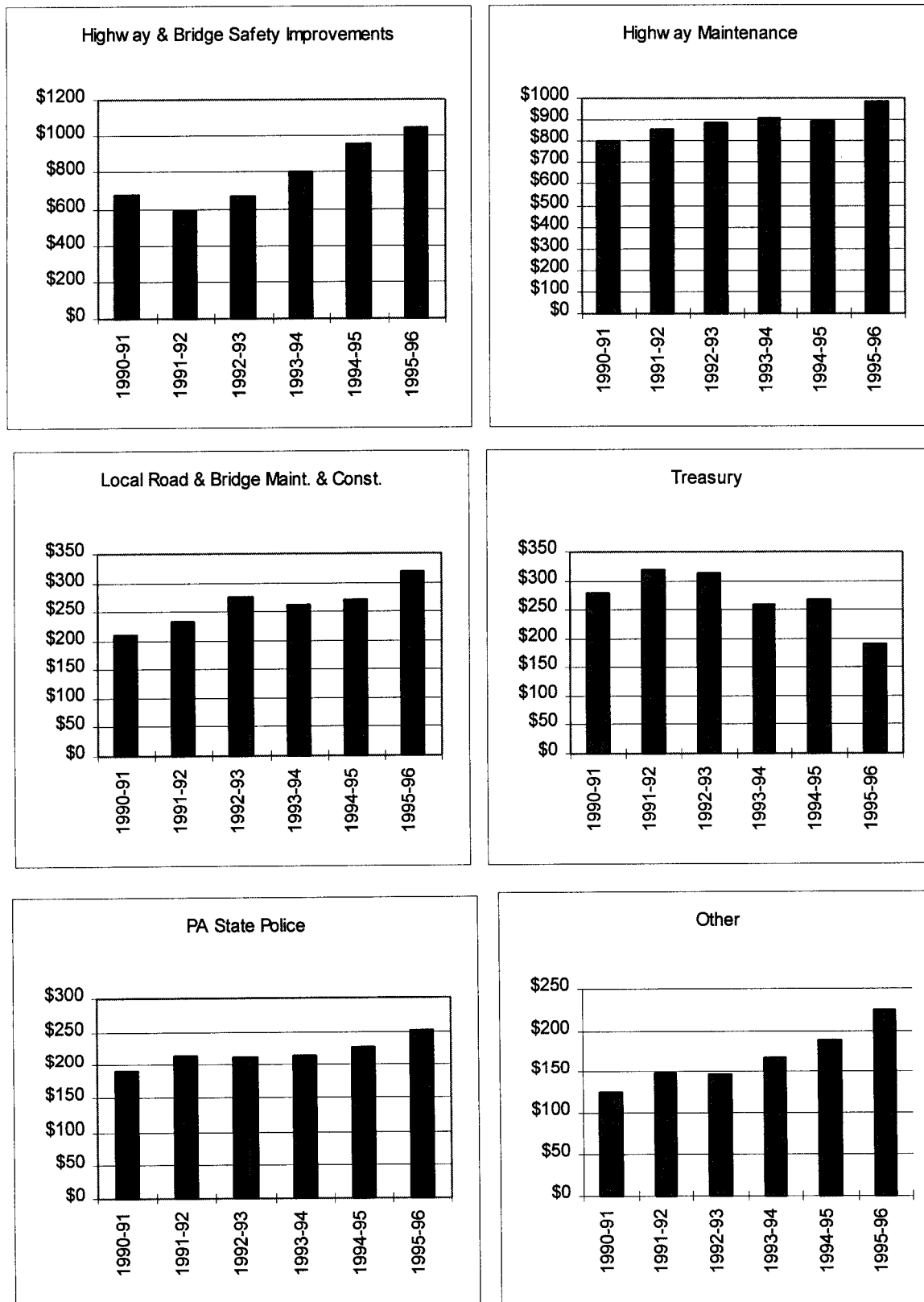
Motor License Fund Expenditures by Revenue Source
 (\$ Billions)



Motor License Fund Expenditures
 FYs 1994-95 and 1995-96
 (\$ Millions)



Motor License Fund Expenditures (\$Millions)



Source: Developed from Governor's Executive Budget, FY 1992-93 through FY 1996-97. "Other" includes expenditures for safety administration and licensing, general government operations, aviation operations, and other miscellaneous expenditures.

Deputate: **Executive Office, Administration, Planning**
 Component: **Financial Management**

Measures: ***Motor License Fund (MLF) Outstanding Bonded Indebtedness***
Debt Service Requirements on Outstanding MLF Bonds
Debt Service as a Percentage of MLF Revenue

Description: Outstanding bonded indebtedness is the amount of principal outstanding for highway and bridge bonds that are to be repaid from the Motor License Fund. The debt service requirement on outstanding bonds is the total amount that will be needed from the Motor License Fund to cover payment of interest and repayment of principal on the outstanding highway and bridge bonds. Debt service as a percentage of Motor License Fund revenues shows the percentage of the Motor License Fund revenues used annually to pay interest and repay principal on mature highway and bridge bonds. (PennDOT does not reserve funds to repay principal and interest, rather it makes annual payments to the Capital Debt Fund, which in turn pays the principal and interest due that year.)

Type: Explanatory

Goal: No stated goals.

Performance: From June 30, 1980, through June 30, 1995, outstanding bonded indebtedness for highways and bridges decreased from \$1.8 billion to \$975 million. The debt service requirement to pay off the principal and interest on these bonds was \$1.28 billion as of December 31, 1995. The debt service for these bonds as a percentage of the Motor License Fund revenues decreased from 17.13 percent as of June 30, 1980, to 12.74 percent as of June 30, 1995.

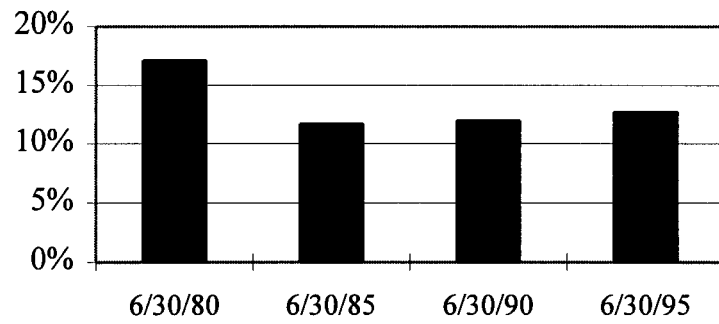
Outstanding Bonded Indebtedness to Be Repaid From Motor License Fund
 (\$000)

| | <u>6/30/80</u> | <u>6/30/85</u> | <u>6/30/90</u> | <u>6/30/95</u> |
|----------------|----------------|----------------|----------------|----------------|
| Highways | \$1,822,570 | \$1,588,770 | \$1,165,545 | \$720,230 |
| Bridges..... | <u>0</u> | <u>0</u> | <u>192,450</u> | <u>255,078</u> |
| Total..... | \$1,822,570 | \$1,588,770 | \$1,357,995 | \$975,308 |

Debt Service Requirements on Outstanding Bonds Issued as of 12/31/95
 (\$000)

| | <u>Highway</u> <u>Principal</u> | <u>Highway</u> <u>Interest</u> | <u>Bridge</u> <u>Principal</u> | <u>Bridge</u> <u>Interest</u> | <u>Total</u> <u>Principal</u> | <u>Total</u> <u>Interest</u> | <u>Total</u> |
|-------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|---------------------------------|--------------|
| Through 6/30/2014 .. | \$720,230 | \$184,096 | \$255,078 | \$124,037 | \$975,308 | \$308,133 | \$1,283,441 |

Debt Service as a Percent of Motor License Fund Revenue*



*Includes highways and bridges.

Source: Developed from data provided by Office of the Budget.

Deputate: **Executive Office, Administration, Planning**
Component: **Administration and Personnel**

Measure: ***Continuous Quality Improvement (CQI) Teams, Employees Trained, and Reported Net Savings***

Description: CQI is an organizational management philosophy that seeks to create a Department culture committed to customer-driven improvement. CQI emphasizes strategic planning, training in the use of quality tools and techniques, employee involvement, and customer satisfaction.¹ Net savings are determined by calculating the difference between the cost under the old process versus the new process. Savings are not, however, adjusted to reflect training and employee meeting costs supporting this effort.

Type: Output (number of teams and employees trained)
Outcome (net savings)

Goal: **Number of Teams:** No stated goals.

Number of Employees Trained: For most of the period reviewed in this audit, PennDOT had two goals: (a) provide CQI overview training to 95 percent of all employees by the end of 1995; and (b) train 50 percent of all employees in at least one course in the CQI curriculum by the end of 1996 and train 80 percent by the year 2000.²

Documented CQI Process Net Savings: No stated goals.

Performance: PennDOT CQI teams, formerly called Employee Involvement teams, increased to 275 in FY 1994-95. As of June 30, 1995, 64 percent of all PennDOT employees had received CQI overview training and 24 percent had received training in the CQI curriculum. EI/CQI net savings ranged from \$303,200 in FY 1990-91 to a high of \$2,206,400 in FY 1991-92 to a low of \$48,600 in FY 1994-95.

¹The CQI effort, beginning in CY 1996, is transitioning from a CQI team driven process to a Value Added Management (re-engineering) process. Each bureau, engineering district, and maintenance district is required to go through two measurable re-engineering processes per year. The unit's budget is not to be approved unless the re-engineering process is accepted by PennDOT executive management.

²Two additional goals for the end of CY 1996, not tracked here, have now also been established: (a) train 80 percent of first line supervisors and above, and all managers responsible for implementing re-engineering project objectives, in the Creative Problem Solving Process; and (b) train 95 percent of first line managers and above in at least one of the quality techniques. The effectiveness of the CQI initiative will be measured by the number of improvements, reduction in process cycle times and related cost savings between the old process versus the new process, and customer indices.

Continuous Quality Improvement Program Data

| | | <u>1990-91</u> | <u>1991-92</u> | <u>1992-93</u> | <u>1993-94</u> | <u>1994-95</u> |
|-----------------|---|----------------|----------------|----------------|----------------|----------------|
| <u>Input:</u> | # Active Teams at end FY ^a | 162 | 171 | 210 | 211 | 275 |
| <u>Output:</u> | Employees Receiving Overview Training ^b | NA | NA | 32% | 39% | 64% |
| | # of EI Presentations | 136 | 147 | 106 | NA | NA |
| | Employees Receiving CQI Training ^c | NA | NA | 21% | 23% | 24% |
| <u>Outcome:</u> | Net Savings (\$M) | \$0.3 | \$2.2 | \$1.8 | \$0.06 | \$0.05 |

^aCQI teams were formed in FY 1992-93. They were previously called Employee Involvement (EI) teams.

^bThe goal was to have 95 percent of the employees trained by the end of CY 1995.

^cThe goal is to have 50 percent of the employees trained in at least one course in the CQI curriculum by the end of 1996 and 80 percent by 2000.

Source: Developed from the *Management Objective Report*, June 30, 1990-1995.

Deputate: **Executive Office, Administration, Planning**
 Component: **Administration and Personnel**

Measure: ***Average Annual Sick Leave Usage and Cost Per Employee***

Description: PennDOT average annual sick leave use and the cost per employee compared to the Commonwealth average as reported in the Governor's Annual Work Force Report.

Type: Efficiency

Goal: No stated goal.

Performance:

Over Time: PennDOT's average annual sick leave usage has ranged from a high of 9.5 days in FY 1990-91 to a low of 8.1 days in FY 1993-94.

Average Days Per Employee Per Year

| | FY <u>89-90</u> | FY <u>90-91</u> | FY <u>91-92</u> | FY <u>92-93</u> | FY <u>93-94</u> | FY <u>94-95</u> |
|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| PennDOT..... | 9.2 | 9.5 | 9.2 | 8.3 | 8.1 | 8.4 |
| Commonwealth..... | 9.4 | 9.4 | 9.1 | 8.6 | 8.6 | -- |

The annual salary cost per PennDOT employee per year for sick leave usage has been consistently below the Pennsylvania State Government average.

Average Salary Cost Per Employee Per Year*

| | FY <u>89-90</u> | FY <u>90-91</u> | FY <u>91-92</u> | FY <u>92-93</u> | FY <u>93-94</u> | FY <u>94-95</u> |
|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| PennDOT..... | \$834 | \$911 | \$880 | \$829 | \$885 | \$922 |
| Commonwealth | \$899 | \$955 | \$939 | \$931 | \$1,019 | -- |

*Excludes employee benefit costs paid.

Source: Developed from *Governor's Annual Work Force Report 1995*.

Measure 46

Deputate: **Executive Office, Administration, Planning**
Component: **Administration and Personnel**

Measures: ***Number of Employee First-Step Labor Relations Grievances Filed***
Ratio of First-Step Grievances to Positions Covered by Bargaining Unit Agreements

Description: Union grievances follow a four-step process, the first being to file with the worker's PennDOT organizational unit. The other three steps involve the PennDOT Engineering District Office, the PennDOT Bureau of Personnel, and the Governor's Office of Administration. Employees in positions covered by bargaining unit agreements include both those employees who do and do not join a union. Both groups are eligible to file a grievance.

Type: Outcome

Goal: No stated goal.

Performance: PennDOT employee first-step labor relations grievances filed ranged from a low of 726 in FY 1990-91 to a high of 920 in FY 1993-94.

Employee Grievances Filed

| | <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Step 1 Grievances Filed | 726 | 890 | 882 | 920 | 820 |

Source: Developed from PennDOT's *Management Objectives Report* (Blue Book).

**Percent of Employees in Positions Covered
by Bargaining Unit Agreements
Filing First-Step Grievances**

| <u>FY90-91</u> | <u>FY91-92</u> | <u>FY92-93</u> | <u>FY93-94</u> | <u>FY94-95</u> |
|----------------|----------------|----------------|----------------|----------------|
| 7.4% | 8.8% | 8.6% | 8.8% | 8.0% |

Source: Developed from data provided by PennDOT's Bureau of Personnel.

Deputate: **Executive Office, Administration, Planning**
 Component: **Administration and Personnel**

Measure: ***Percentage of Minority and Female Employees***

Description: The number and percentage of minority and female employees.

Type: Outcome

Goal: PennDOT's goal for minority and female employees was 5.38 percent and 10.98 percent, respectively, of filled positions at pay grade 05 and above. PennDOT's goal for all minority employees was 8.4 percent of its workforce.

Performance: As shown below, in FY 1994-95, PennDOT achieved its goals at 5.4 percent, 11.3 percent, and 8.4 percent, respectively.

PennDOT Employee Profile

| | <u>FY</u> <u>1989-90</u> | <u>FY</u> <u>1990-91</u> | <u>FY</u> <u>1991-92</u> | <u>FY</u> <u>1992-93</u> | <u>FY</u> <u>1993-94</u> | <u>FY</u> <u>1994-95</u> |
|--|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Total Employees at Pay Group 05 and Above | 4,969 | 4,796 | 4,684 | 5,097 | 5,303 | 5,223 |
| Minority Employees at Pay Group 05 and Above | 601 (4.9%) | 576 (4.9%) | 609 (5.1%) | 625 (5.1%) | 661 (5.3%) | 659 (5.4%) |
| Female Employees at Pay Group 05 and Above | 1,153 (9.4%) | 1,140 (9.7%) | 1,302 (10.9%) | 1,335 (10.9%) | 1,348 (10.8%) | 1,379 (11.3%) |
| Total Complement | 12,270 | 11,754 | 11,949 | 12,252 | 12,477 | 12,204 |
| Total Minority Employees | 921 (7.5%) | 874 (7.4%) | 981 (8.2%) | 987 (8.1%) | 1,040 (8.3%) | 1,023 (8.4%) |
| Total Female Employees | 1,926 (15.7%) | 1,849 (15.7%) | 2,016 (16.9%) | 2,048 (16.7%) | 2,112 (16.9%) | 2,085 (17.1%) |

Source: Developed from the *1993-94 PennDOT Annual Report* and the *Management Objectives Report*, June 30, 1990-1995.

Deputate: **Executive Office, Administration, Planning**
Component: **Administration and Personnel**

Measures: ***State and Federal Contract Dollars Awarded or Committed to Minority, Female, or Disadvantaged Business Enterprises***

Minority and Female Work Hours as Percent of Total Construction Contractor Work Hours¹

Description: The percentage of state dollars awarded by PennDOT to minority business enterprises (MBE) and to women business enterprises (WBE). The federal government requires PennDOT to track federal funds awarded to disadvantaged business enterprises (DBEs), which may be either MBEs or WBEs.

Type: Outcome

Goal: The minimum participation level (MPL) through FY 1994-95 for state project dollars contracted with MBEs and WBEs was 8 percent and 2 percent, respectively. PennDOT's MPL for federal project dollars contracted with DBEs is 10 percent of all contracted federal project dollars. For FY 1995-96 PennDOT lowered its MBE MPL to 7 percent; WBE and DBE MPLs remained the same.

The MPLs for minority (effective July 1993) and female (effective July 1992) work hours as a percentage of total construction contractor work hours were 9.1 percent and 6.9 percent, respectively. FY 1995-96 goals for minority work hours were lowered to 8.5 percent, but remained the same for female work hours.

Performance: The value of FY 1994-95 state-funded contracts to MBEs was 5.3 percent of all contracts, below the 8 percent MPL. Average annual awards to MBEs from FY 1989-90 through FY 1994-95 (7.2 percent) were also below MPL. Awards to WBEs and federally funded PennDOT commitments to DBEs exceeded PennDOT's MPLs.

During FY 1994-95, both minority and female work hours as a percentage of total construction contractor work hours (8.1 percent and 4.5 percent respectively) failed to meet PennDOT's goal (9.1 percent and 6.9 percent respectively).

¹Includes both construction and betterment projects.

State Project Dollar Awards to MBEs and WBEs

| | <u>FY 1989-90</u> | <u>FY 1990-91</u> | <u>FY 1991-92</u> | <u>FY 1992-93</u> | <u>FY 1993-94</u> | <u>FY 1994-95</u> |
|--------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| State Project \$ Awarded... | \$114.0M | \$198.8M | \$109.6M | \$121.1M | \$56.0M | \$133.0M |
| MBE Firms ... | \$7.9M (6.8%) | \$18.3M (9.2%) | \$6.9M (6.3%) | \$9.0M (7.4%) | \$3.8M (6.8%) | \$7.1M (5.3%) |
| WBE Firms ... | \$2.9M (2.3%) | \$6.2M (3.1%) | \$4.0M (3.6%) | \$3.6M (2.9%) | \$1.1M (2.0%) | \$4.2M (3.2%) |

Federal Aid Project Dollars Committed to DBEs

| | <u>FY 1989-90</u> | <u>FY 1990-91</u> | <u>FY 1991-92</u> | <u>FY 1992-93</u> | <u>FY 1993-94</u> | <u>FY 1994-95</u> |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Federal Project \$ Awarded..... | \$585.2M | \$498.3M | \$581.4M | \$884.0M | \$866.9M | \$824.5M |
| Federal \$ Committed to DBE Firms..... | \$68.0M | \$56.5M | \$66.7M | \$121.2M | \$125.6M | \$96.9M |
| Percent With DBE Firms..... | 11.6% | 11.3% | 11.5% | 13.7% | 14.5% | 11.7% |

Minority and Female Work Hours as a Percent of Total Construction Contractor Work Hours

| | <u>FY 1989-90</u> | <u>FY 1990-91</u> | <u>FY 1991-92</u> | <u>FY 1992-93</u> | <u>FY 1993-94</u> | <u>FY 1994-95</u> |
|------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Minority Work Hours | 11.5% | 11.6% | 8.7% | 7.0% | 6.7% | 8.1% |
| Female Work Hours | 4.3% | 4.4% | 4.2% | 4.0% | 4.7% | 4.5% |

Source: Developed from PennDOT's *Management Objectives Report*, June 30, 1990-95.

Deputate: **Executive Office, Administration, Planning**
 Component: **Purchasing**

Measure: ***Percent of Key DGS Commodity Contracts Processed on Time***

Description: The percent of the 50 DGS commodity contracts of particular interest to PennDOT (such as salt, paint, tires, and pipe) that are processed on time. Although this is more a measure of DGS performance (DGS is responsible to execute these contracts), it is included here because of its impact on PennDOT operations.

Type: Outcome

Goal: To have finalized 91 percent of the key commodity contracts (46 of the 50) by the scheduled contract effective date.

Performance: As shown below, DGS has not been particularly successful in processing PennDOT's key commodity contracts on time.

Percent of 50 DGS Commodity Contracts of Greatest Interest to PennDOT Processed on Time

| <u>Fiscal Year</u> | <u>Goal</u> | <u>Actual</u> | <u>Goal Achieved</u> |
|--------------------|----------------|----------------|----------------------|
| 1990-91 | 91% (46 of 50) | 90% (45 of 50) | No |
| 1991-92 | 91% (46 of 50) | 77% (39 of 50) | No |
| 1992-93 | 91% (46 of 50) | 68% (34 of 50) | No |
| 1993-94 | 91% (46 of 50) | 67% (34 of 50) | No |
| 1994-95 | 91% (46 of 50) | 78% (39 of 50) | No |

Source: Developed from PennDOT's *Management Objectives Report*, June 30, 1990-1995.

Deputate: **Executive Office, Administration, Planning**
 Component: **Purchasing**

Measure: ***Days to Process Service Purchase Contracts and Purchase Requisitions***

Description: The processing time in calendar days (CD) for service purchase contracts (SPCs) from the date received by PennDOT's Bureau of Office Services to the date approved by the Comptroller. Purchase requisition (PR) processing time, until July 1, 1995, was measured from the date initiated by a PennDOT employee to the date DGS mailed the approved purchase order to the vendor.¹ Typical service purchase contracts include roadside vegetation management, mowing, roadside rest maintenance, refuse pick-up, and electrical services. Purchase requisitions are used for commodities (such as trucks, graders, and computer equipment) over \$5,000 (\$10,000 as of January 1996) that are not on a DGS contract.

Type: Efficiency

Goal: PennDOT's service purchase contract average processing time goal is 30 calendar days. The goal for purchase requisitions is 105 calendar days.

Performance: In FY 1994-95, PennDOT met its service purchase contract average processing time goals but missed the purchase requisition average processing time goal by one day.

Processing Time in Calendar Days

| <i>Service Purchase Contracts</i> | | | | |
|--|-----------------|-----------|------------------|----------------------|
| <u>Fiscal Year</u> | <u>Category</u> | <u>CD</u> | <u>CD Actual</u> | <u>Goal Achieved</u> |
| 1989-90 | 90% | 41 | 40.3 | Yes |
| 1990-91 | 90% | 40 | 47.5 | No |
| 1991-92 | Average | 30 | 33.4 | No |
| 1992-93 | Average | 30 | 30.3 | No |
| 1993-94 | Average | 30 | 27.5 | Yes |
| 1994-95 | Average | 30 | 27.1 | Yes |
| <i>Purchase Requisitions</i> | | | | |
| <u>Fiscal Year</u> | <u>Category</u> | <u>CD</u> | <u>CD Actual</u> | <u>Goal Achieved</u> |
| 1989-90 | 90% | 120 | 118.8 | Yes |
| 1990-91 | 90% | 120 | 117.3 | Yes |
| 1991-92 | Average | 75 | 105.1 | No |
| 1992-93 | Average | 105 | 118.4 | No |
| 1993-94 | Average | 105 | 102.3 | Yes |
| 1994-95 | Average | 105 | 106.0 | No |

^aIn FY 1991-92, the goal was changed from processing 90 percent of all SPCs within an average 40-41 calendar days to processing all SPCs within an average of 30 calendar days.

^bIn FY 1991-92, the goal was changed from processing 90 percent of all PRs within an average of 120 calendar days to processing all PRs within 75 calendar days; this goal was changed to 105 calendar days in FY 1992-93.

Source: Developed from PennDOT's *Management Objectives Report*, June 30, 1990-1995.

¹Beginning in FY 1995-96, the start point in the elapsed time measured was changed to the date PennDOT submits the purchase order to the Department of General Services.

IV. APPENDICES

APPENDIX A

Summary of Questionnaire Responses of District Engineers

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | |
|---|----------------|-----|-------|-----|---------|----|----------|----|-------------------|----|
| | # | % | # | % | # | % | # | % | # | % |
| 1. Overall, PennDOT is an efficient and effective organization..... | 4 | 50% | 4 | 50% | 0 | 0% | 0 | 0% | 0 | 0% |
| 2. The policies and procedures PennDOT uses to procure materials results in the Commonwealth receiving fair value for the money spent | 0 | 0 | 4 | 50 | 3 | 38 | 1 | 13 | 0 | 0 |
| 3. The policies, procedures and standards established by the central office help our <i>engineering district</i> in the efficient and effective delivery of services..... | 0 | 0 | 5 | 63 | 2 | 25 | 1 | 13 | 0 | 0 |
| 4. The policies, procedures, and standards established by the central office help our <i>county maintenance districts</i> in the efficient and effective delivery of services | 0 | 0 | 4 | 50 | 4 | 50 | 0 | 0 | 0 | 0 |
| 5. <i>Engineering districts</i> have good criteria for determining when to contract out for design and maintenance services | 3 | 38 | 4 | 50 | 0 | 0 | 1 | 13 | 0 | 0 |
| 6. <i>County maintenance districts</i> have good criteria for determining when to contract out for maintenance services | 3 | 38 | 4 | 50 | 0 | 0 | 1 | 13 | 0 | 0 |
| 7. The Blue Book and Green Book measures are generally good indicators of the performance of the <i>engineering districts</i> | 2 | 25 | 3 | 38 | 3 | 38 | 0 | 0 | 0 | 0 |
| 8. The Blue Book and Red Book measures are generally good indicators of the performance of <i>county maintenance districts</i> | 2 | 25 | 3 | 38 | 3 | 38 | 0 | 0 | 0 | 0 |
| 9. PennDOT's maintenance operations would be more productive if the central office trusted the <i>district engineers</i> to make more of the decisions about priorities..... | 3 | 38 | 0 | 0 | 3 | 38 | 2 | 25 | 0 | 0 |
| 10. PennDOT's maintenance operations would be more productive if the central office trusted the <i>county maintenance managers</i> to make more of the decisions about priorities | 2 | 25 | 0 | 0 | 4 | 50 | 2 | 25 | 0 | 0 |

Appendix A (Continued)

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | |
|---|----------------|-----|-------|-----|------------|-----|----------|-----|-------------------|----|
| | # | % | # | % | # | % | # | % | # | % |
| 11. Our <i>engineering district office</i> has the personnel we need to perform our work in a timely manner | 0 | 0% | 3 | 38% | 2 | 25% | 3 | 38% | 0 | 0% |
| 12. Our <i>county maintenance districts</i> have the personnel they need to perform their work in a timely manner | 0 | 0 | 3 | 38 | 4 | 50 | 1 | 13 | 0 | 0 |
| 13. Our <i>engineering district</i> has the computers and other equipment we need to perform our work in a timely manner | 0 | 0 | 4 | 50 | 1 | 13 | 3 | 38 | 0 | 0 |
| 14. Our <i>county maintenance districts</i> have the equipment they need to perform their work in a timely manner | 1 | 13 | 2 | 25 | 4 | 50 | 1 | 13 | 0 | 0 |
| 15. The performance statistics compiled by our county maintenance districts are generally accurate | 2 | 25 | 6 | 75 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16. The counties in our district are treated fairly under the current maintenance allocation formula | 0 | 0 | 2 | 25 | 4 | 50 | 1 | 13 | 1 | 3 |
| 17. PennDOT's maintenance operations would be more efficient and effective if more <i>county maintenance districts</i> were consolidated | 1 | 13 | 1 | 13 | 5 | 63 | 1 | 13 | 0 | 0 |
| 18. Our engineering district has been aggressive in emphasizing greater intermodalism within our district | 2 | 25 | 5 | 63 | 0 | 0 | 1 | 13 | 0 | 0 |
| 19. It has been suggested to us that county maintenance managers schedule less important maintenance activities in the last few months before the end of the fiscal year in order to achieve "goals" or "quotas" instead of concentrating on more serious maintenance needs in categories where the goals or quotas have already been met. Do you agree that this occurs? | 3 | 38% | 4 | 50% | 1 | 13% | | | | |
| | Yes | | No | | No Opinion | | | | | |
| | # | % | # | % | # | % | | | | |

Appendix A (Continued)

Summary of Questionnaire Responses of County Maintenance Managers

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | |
|---|----------------|-----|-------|-----|---------|-----|----------|----|-------------------|----|
| | # | % | # | % | # | % | # | % | # | % |
| 1. Overall, my work unit performs well | 9 | 24% | 24 | 63% | 4 | 11% | 1 | 3% | 0 | 0% |
| 2. The policies, procedures, and standards established by the <i>central office</i> help my county maintenance district in the efficient and effective delivery of services | 0 | 0 | 13 | 34 | 15 | 40 | 5 | 13 | 3 | 8 |
| 3. The policies, procedures, and standards established by our engineering district help my <i>county maintenance district</i> in the efficient and effective delivery of services | 5 | 13 | 13 | 34 | 14 | 37 | 5 | 13 | 1 | 3 |
| 4. The policies and procedures PennDOT uses to procure materials and services results in the Commonwealth receiving fair value for the money spent..... | 1 | 3 | 3 | 8 | 8 | 21 | 20 | 53 | 6 | 16 |
| 5. The Blue Book and Red Book measures are generally good indicators of the performance of county maintenance districts..... | 0 | 0 | 17 | 45 | 10 | 26 | 7 | 18 | 3 | 8 |
| 6. The statistics compiled by our county and reported to the central office are generally accurate..... | 15 | 40 | 20 | 53 | 3 | 8 | 0 | 0 | 0 | 0 |
| 7. PennDOT's maintenance operations would be more productive if the central office trusted the county managers to make more of the decisions about priorities..... | 15 | 40 | 13 | 34 | 8 | 21 | 2 | 5 | 0 | 0 |
| 8. My county maintenance district has the equipment we need to perform our work in a timely manner | 6 | 16 | 20 | 53 | 1 | 3 | 8 | 21 | 3 | 8 |
| 9. My county maintenance district has the personnel we need to perform our work in a timely manner | 2 | 5 | 9 | 24 | 8 | 21 | 12 | 32 | 7 | 18 |

Appendix A (Continued)

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | |
|--|----------------|-----|-------|-----|------------|----|----------|----|-------------------|----|
| | # | % | # | % | # | % | # | % | # | % |
| 10. My personnel are adequately trained for the tasks that they must perform | 4 | 11 | 24 | 64 | 8 | 21 | 1 | 3 | 1 | 3 |
| 11. Our county is treated fairly under the current maintenance allocation formula | 2 | 5 | 8 | 21 | 5 | 13 | 5 | 13 | 18 | 47 |
| | Yes | | No | | No Opinion | | | | | |
| | # | % | # | % | # | % | # | % | # | % |
| 12. It has been suggested to us that county maintenance managers schedule less important maintenance activities in the last few months before the end of the fiscal year in order to achieve "goals" or "quotas" instead of concentrating on more serious maintenance needs in categories where the goals or quotas have already been met. Do you agree that this occurs?..... | 21 | 57% | 15 | 41% | 1 | 3% | | | | |

Appendix A (Continued)

Summary of Questionnaire Responses of PennDOT Employees

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Response |
|--|----------------|---------|---------|----------|-------------------|-------------|
| | # % | # % | # % | # % | # % | # % |
| 1. Overall, my work unit performs well..... | 95 38% | 106 42% | 23 9% | 15 6% | 12 5% | 1 0.4% |
| 2. I have the resources (time, money, equipment, people) to perform my job effectively | 30 12 | 81 32 | 48 19 | 60 24 | 31 12 | 2 1 |
| 3. PennDOT does a good job of measuring the performance of my work unit | 31 12 | 103 41 | 62 25 | 30 12 | 23 9 | 3 1 |
| 4. I have a good understanding of the goals and objectives of my work unit..... | 97 39 | 111 44 | 27 11 | 6 2 | 10 4 | 1 0.4 |
| 5. PennDOT is efficient at procuring equipment, supplies, services, and materials..... | 24 10 | 74 29 | 50 20 | 66 26 | 38 15 | 0 0 |
| 6. My work unit provides excellent service to our customers.... | 96 38 | 92 37 | 33 13 | 15 6 | 13 5 | 3 1 |

APPENDIX B

PennDOT Personnel Complement*

(June 30, 1990, and June 30, 1995)

| | 6/30/90 | | 6/30/95 | | % <u>Change</u> |
|---|-----------------------|----------------------|-----------------------|----------------------|--------------------|
| | <u>Employees</u> # | <u>%^a</u> | <u>Employees</u> # | <u>%^a</u> | |
| Highway Administration Deputate^b | | | | | |
| Central Office | 596 ^c | 5 | 639 ^c | 5 | 7 |
| Engineering Districts | 3,116 ^d | 25 | 3,023 ^d | 25 | (3) |
| County Maintenance Districts ^e | | | | | |
| PMO Complement..... | 6,041 ^f | 49 | 5,777 ^f | 47 | (4) |
| Non-PMO Complement..... | <u>732</u> | <u>6</u> | <u>738</u> | <u>6</u> | 1 |
| Subtotal - Highway Admin. Deputate | 10,485 | 85 | 10,177 | 83 | (3) |
| Safety Administration Deputate | 1,020 | 8 | 1,277 | 10 | 25 |
| Local & Area Transportation Deputate .. | <u>43</u> | <u>g</u> | <u>46</u> | <u>g</u> | 7 |
| Aviation & Rail Freight Deputate | 113 ^h | 1 | 106 ^h | 1 | (6) |
| Executive Office, Administration, Planning | | | | | |
| Executive Office..... | 133 | 1 | 144 | 1 | 8 |
| Administration Deputate | 371 | 3 | 352 | 3 | (5) |
| Planning Deputate | <u>105</u> | <u>1</u> | <u>102</u> | <u>1</u> | (3) |
| Subtotal - Administrative | 609 | 5 | 598 | 5 | (2) |
| Department Total | 12,270 | 100 | 12,204 | 100 | (1) |

*Functions of the Center for Highway Safety, with an authorized personnel complement of 70 positions, were transferred from the Safety Administration deputate to the Highway Administration deputate during this time.

^aMay not add due to rounding.

^bOver 98.5 percent of complement for all transportation modes.

^c6 percent of the Highway Administration deputate complement.

^d30 percent of the Highway Administration deputate complement.

^eAbout 64 percent of the Highway Administration deputate complement.

^f89 percent of the complement of all County Maintenance Districts works on the roadway providing maintenance services.

^gLess than 0.5 percent of complement for all transportation modes and total complement.

^h1 percent of complement for all transportation modes.

Source: Developed from information obtained from PennDOT *Personnel Strength and Activity* reports.

APPENDIX C

FY 1994-95 Highway Maintenance Appropriations to Counties (Federal and State Funding Combined)^a

(\$000)

| <u>County</u> | Total Net Funding to County | District Office Operations | Central Office Operations | Gross Total ^a |
|--------------------------|-----------------------------------|----------------------------------|---------------------------------|-----------------------------|
| 1-1 Crawford | \$14,460 | \$ 930 | \$1,257 | \$16,714 |
| 1-2 Erie | 18,220 | 1,289 | 1,742 | 20,884 |
| 1-3 Forest | 3,041 | 250 | 337 | 3,646 |
| 1-4 Mercer | 11,000 | 889 | 1,202 | 13,155 |
| 1-5 Venango..... | 9,448 | 858 | 1,159 | 11,527 |
| 1-6 Warren | <u>9,693</u> | <u>598</u> | <u>808</u> | <u>11,142</u> |
| District 1-0 Total..... | \$65,862 | \$4,814 | \$6,505 | \$77,068 |
| 2-1 Centre..... | \$10,149 | \$ 817 | \$ 964 | \$11,981 |
| 2-2 Clearfield..... | 15,355 | 1,216 | 1,434 | 17,961 |
| 2-3 Clinton..... | 5,486 | 473 | 558 | 6,547 |
| 2-4 Cameron..... | 2,097 | 204 | 242 | 2,556 |
| 2-5 McKean | 7,823 | 547 | 644 | 9,048 |
| 2-6 Potter..... | 7,887 | 581 | 684 | 9,189 |
| 2-7 Mifflin..... | 4,292 | 341 | 402 | 5,056 |
| 2-8 Elk | 6,920 | 465 | 548 | 7,962 |
| 2-9 Juniata | <u>3,933</u> | <u>386</u> | <u>456</u> | <u>4,799</u> |
| District 2-0 Total..... | \$63,942 | \$5,030 | \$5,932 | \$75,099 |
| 3-1 Columbia | \$ 7,272 | \$ 426 | \$ 794 | \$ 8,534 |
| 3-2 Lycoming..... | 12,082 | 653 | 1,216 | 14,016 |
| 3-3 Montour..... | 3,217 | 173 | 323 | 3,730 |
| 3-4 Northumberland | 9,394 | 493 | 918 | 10,854 |
| 3-5 Snyder | 4,130 | 246 | 458 | 4,858 |
| 3-6 Sullivan..... | 3,422 | 213 | 396 | 4,052 |
| 3-7 Tioga..... | 9,613 | 557 | 1,038 | 11,263 |
| 3-8 Union..... | 4,351 | 259 | 484 | 5,120 |
| 3-9 Bradford | <u>12,382</u> | <u>649</u> | <u>1,209</u> | <u>14,305</u> |
| District 3-0 Total..... | \$65,863 | \$3,669 | \$6,836 | \$76,732 |
| 4-2 Lackawanna..... | \$11,577 | \$ 864 | \$1,265 | \$13,774 |
| 4-3 Luzerne | 16,955 | 1,224 | 1,789 | 20,064 |
| 4-4 Pike | 5,026 | 401 | 587 | 5,451 |
| 4-5 Susquehanna..... | 11,028 | 745 | 1,091 | 12,852 |
| 4-6 Wayne..... | 8,153 | 603 | 883 | 9,606 |
| 4-7 Wyoming | <u>5,481</u> | <u>365</u> | <u>534</u> | <u>6,302</u> |
| District 4-0 Total..... | \$58,220 | \$4,202 | \$6,149 | \$68,049 |
| 5-1 Berks | \$13,211 | \$1,184 | \$1,260 | \$15,722 |
| 5-2 Carbon..... | 6,143 | 721 | 769 | 7,256 |
| 5-3 Lehigh | 9,231 | 888 | 945 | 10,900 |
| 5-4 Monroe | 10,856 | 895 | 953 | 12,755 |
| 5-5 Northampton..... | 9,285 | 707 | 752 | 10,757 |
| 5-6 Schuylkill | <u>9,934</u> | <u>961</u> | <u>1,022</u> | <u>11,972</u> |
| District 5-0 Total..... | \$58,660 | \$5,356 | \$5,701 | \$69,362 |

Appendix C (Continued)

| <u>County</u> | <u>Total Net Funding to County</u> | <u>District Office Operations</u> | <u>Central Office Operations</u> | <u>Gross Total^a</u> |
|--------------------------|--|---|--|------------------------------------|
| 6-1 Bucks..... | \$19,831 | \$1,216 | \$1,728 | \$ 22,701 |
| 6-2 Chester..... | 14,420 | 1,184 | 1,683 | 17,377 |
| 6-3 Delaware..... | 16,868 | 988 | 1,403 | 19,334 |
| 6-4 Montgomery..... | 19,404 | 1,341 | 1,908 | 22,582 |
| 6-5 Philadelphia..... | <u>27,887</u> | <u>1,172</u> | <u>1,667</u> | <u>30,815</u> |
| District 6-0 Total..... | \$98,410 | \$5,901 | \$8,389 | \$112,809 |
| 8-1 Adams..... | \$ 7,598 | \$ 445 | \$ 845 | \$ 8,933 |
| 8-2 Cumberland..... | 11,102 | 486 | 925 | 12,562 |
| 8-3 Franklin..... | 9,181 | 508 | 965 | 10,706 |
| 8-4 York..... | 14,792 | 829 | 1,576 | 17,281 |
| 8-5 Dauphin..... | 11,302 | 553 | 1,052 | 12,963 |
| 8-7 Lancaster..... | 18,104 | 926 | 1,763 | 20,887 |
| 8-8 Lebanon..... | 7,852 | 373 | 710 | 8,973 |
| 8-9 Perry..... | <u>7,059</u> | <u>312</u> | <u>593</u> | <u>7,996</u> |
| District 8-0 Total..... | \$86,990 | \$4,432 | \$8,429 | \$100,301 |
| 9-1 Bedford..... | \$ 9,299 | 589 | 918 | \$10,855 |
| 9-2 Blair..... | 7,500 | 459 | 715 | 8,712 |
| 9-3 Cambria..... | 17,352 | 837 | 1,305 | 19,482 |
| 9-4 Fulton..... | 4,216 | 313 | 487 | 5,042 |
| 9-5 Huntingdon..... | 6,927 | 439 | 684 | 8,087 |
| 9-7 Somerset..... | <u>15,114</u> | <u>853</u> | <u>1,330</u> | <u>17,162</u> |
| District 9-0 Total..... | \$60,408 | \$3,490 | \$5,439 | \$69,340 |
| 10-1 Armstrong..... | \$10,582 | \$ 632 | \$1,015 | \$12,283 |
| 10-2 Butler..... | 12,956 | 771 | 1,238 | 15,031 |
| 10-3 Clarion..... | 8,282 | 562 | 903 | 9,795 |
| 10-4 Indiana..... | 13,049 | 921 | 1,481 | 15,530 |
| 10-5 Jefferson..... | <u>10,749</u> | <u>619</u> | <u>994</u> | <u>12,415</u> |
| District 10-0 Total..... | \$55,618 | \$3,505 | \$5,631 | \$65,054 |
| 11-1 Allegheny..... | \$57,029 | \$3,325 | \$5,790 | \$66,455 |
| 11-2 Beaver..... | 15,870 | 716 | 1,247 | 17,900 |
| 11-4 Lawrence..... | <u>7,617</u> | <u>422</u> | <u>734</u> | <u>8,812</u> |
| District 11-0 Total..... | \$80,516 | \$4,463 | \$7,771 | \$93,167 |
| 12-1 Fayette..... | \$14,656 | \$ 836 | \$1,423 | \$16,948 |
| 12-2 Greene..... | 12,606 | 710 | 1,208 | 13,456 |
| 12-4 Washington..... | 21,412 | 1,237 | 2,105 | 24,830 |
| 12-5 Westmoreland..... | <u>23,643</u> | <u>1,226</u> | <u>2,085</u> | <u>27,065</u> |
| District 12-0 Total..... | \$72,317 | \$4,009 | \$6,821 | \$82,299 |
| State Total..... | \$766,806 | \$48,871 | \$73,603 | \$889,280 |

^aIncludes federal and state (Act 68, Act 26, Hold Harmless, and emergency fund monies) funding.

Source: Developed from PennDOT Highway Maintenance Appropriation Distribution Analysis.

APPENDIX D

Restrictions on the Operation of Motor Vehicles by Juveniles in Selected States

| State | Minimum Age | Restrictions and Qualifications |
|----------------------|-----------------|--|
| California | 16* | Issued to 16-17 year olds. Restrictions added if licensee is convicted of a violation or involved in an accident for which he is responsible. Provisional status ends on 18th birthday. |
| Colorado | 16 | |
| Connecticut | 16 | |
| Illinois | 16 | Drivers under 17 years old are restricted to curfew hours, between 12:01 and 6 a.m. Saturday and Sunday and between 11 p.m. and 6 a.m. Sunday through Thursday. |
| Indiana | 16 | All licenses held by 16-18 year olds are probationary and may be revoked upon conviction of traffic violation or accident involving injury to persons or damage to property. |
| Louisiana | 15 | In use Monday-Thursday (5 a.m. - 11 p.m.), Friday-Sunday (5 a.m. - 12 p.m.) |
| Maryland | 16 | Must be accompanied by holder of unrestricted license during hours of midnight to 5 a.m. Selected waivers permitted. |
| Massachusetts | 16.5 | All applicants under 18 years old must be accompanied by parent or legal guardian between 1 a.m. and 4 a.m. |
| Michigan | 14 | Issued for transportation to school if no other means is available, if family hardship exists in case of illness or disability, or to help with farming activities. A regular, unrestricted license is available at age 16 with driver's education and at 18 without driver's education. |
| Minnesota | 16 ^b | Expires on 21st birthday. |
| Missouri | 15.5 | Must be accompanied by a parent or guardian. |
| New Jersey | 16 | Granted to 16 year olds if enrolled in a behind-the-wheel driving education course approved by the State or engaged in agricultural pursuit. Restricted to daylight hours. |
| New York | 16 | May operate a vehicle alone at night only to attend school or work and is not permitted to drive alone at any time in New York City; he may operate in Nausseau and Suffolk Counties subject to restrictions specified in Commissioners' regulations. Otherwise restricted to the hours of 5 a.m. - 9 p.m. A regular unrestricted license is available at age 17 with driver's education and at 18 without driver's education. |
| Ohio | 14 | Issued only to relieve hardship. Restricted to daylight hours. A regular juvenile license is available at age 16. A regular unrestricted license is available at age 16 with driver's education and at 18 without driver's education. |
| Oregon | 14 | Issued to attend school only if no other transportation is available (must be approved by principal and sheriff) or for specific emergency purposes and routes (must be approved by DMV, sheriff, judge, and if work related, the employer. |
| Pennsylvania | 16 | Restricted to 5 a.m. to midnight. Becomes regular license at age of 18. |
| South Carolina | 15 | Restricted to 6 a.m. - 6 p.m. except for agricultural use. Becomes regular license at age 16. Valid only in South Carolina. |
| Tennessee | 14 | Restricted to driving to work, school, church, grocery, doctor, or home-farm transit. (6 a.m. - 8 p.m.) . A regular juvenile license is available at age 15. A regular unrestricted license is available at age 16. |
| Texas | 15 | Until age 18, must verify enrolled 80 days in previous semester of school to obtain or renew license. Special restricted license may be obtained without driver education. |
| West Virginia | 16 | Expires the month after age 18. With successful completion of driver training may get regular license from age 16 to 18. |
| Wisconsin | 14 | Necessity must be shown by parent or guardian to attend school, work, or business of a parent. May only operate vehicles of parent or guardian and may not operate a commercial truck, motor bus, or taxicab. Restricted to daylight hours. A regular juvenile license is available at age 15%. A regular unrestricted license is available at age 16 with driver's education and at 18 without driver's education |

*Junior license is available at age 14 if approved by DMV and is necessary for school, work, a family enterprise, or because of illness; must be certified by principal, physician, or employer.

^bRestricted licenses are issued at age 15 for farm area use. Licenses are only valid within a 20-mile radius of the farm house.

Source: Developed from U.S. Department of Transportation 1992 *Driver License Administration Requirements and Fees*.

APPENDIX E

Operator License Processing Information (000)

| | <u>FY 1992-93</u> | <u>FY 1993-94</u> | <u>FY 1994-95</u> |
|--------------------------------|-------------------|-------------------|-------------------|
| New Operator Licenses..... | 235.4 | 225.2 | 259.1 |
| Renewed Operator Licenses..... | <u>1,821.2</u> | <u>1,908.4</u> | <u>1,920.0</u> |
| Total Operator Licenses..... | 2,056.6 | 2,133.6 | 2,179.1 |

*Operator licenses are renewed every four years. Total licensed drivers in Pennsylvania in CY 1995 was reported as 8.2 million.

Vehicle Registration Processing Information (000)

| | <u>FY 1992-93</u> | <u>FY 1993-94</u> | <u>FY 1994-95</u> |
|-----------------------------|-------------------|-------------------|-------------------|
| New Registrations..... | 1,420 | 1,437 | 1,579 |
| Renewed Registrations | <u>7,553</u> | <u>7,818</u> | <u>7,647</u> |
| Total Registrations..... | 8,973 | 9,255 | 9,226 |

Source: Developed from information obtained from PennDOT's Management Objectives Report (Blue Book).

APPENDIX F

Driver License Annual Renewal Fees

(As of April 1996)

| <u>State</u> | <u>Non-Commercial</u> | <u>Commercial</u> | <u>State</u> | <u>Non-Commercial</u> | <u>Commercial</u> |
|--------------------|-----------------------|-------------------|-------------------|-----------------------|-------------------|
| Connecticut..... | \$9.00 | \$12.50 | Nebraska | \$3.75 | \$10.00 |
| New Hampshire ... | 8.00 | 10.50 | Tennessee..... | 3.50 | a |
| Massachusetts..... | 6.75 | 10.50 | Arkansas | 3.50 | 10.50 |
| Rhode Island..... | 6.00 | 10.00 | Washington | 3.50 | 3.00 |
| Pennsylvania..... | 6.00 | 16.00 | New Mexico..... | 3.25 | 3.25 |
| New York..... | 5.45 | 15.45 | California | 3.00 | 7.00 |
| Nevada..... | 5.12 | 13.75 | Alaska..... | 3.00 | 20.00 |
| Idaho..... | 5.12 | 5.88 | Colorado | 3.00 | 6.25 |
| DC..... | 5.00 | 20.00 | Michigan..... | 3.00 | 5.00 |
| Alabama..... | 5.00 | 11.25 | Utah | 3.00 | 6.00 |
| Maine | 5.00 | 6.83 | West Virginia ... | 2.62 | 8.75 |
| Vermont..... | 5.00 | 23.75 | North Dakota ... | 2.50 | 3.75 |
| Mississippi..... | 5.00 | 10.00 | North Carolina.. | 2.50 | 10.00 |
| Minnesota | 4.63 | 9.38 | South Carolina.. | 2.50 | 6.88 |
| Hawaii | 4.50 | 7.50 | Wisconsin..... | 2.50 | 8.00 |
| New Jersey | 4.50 | 8.50 | Delaware..... | 2.50 | 7.00 |
| Louisiana..... | 4.50 | 11.25 | Missouri | 2.50 | 6.67 |
| Oregon | 4.06 | 5.06 | Illinois | 2.50 | 10.00 |
| Maryland..... | 4.00 | 8.00 | Florida..... | 2.50 | 12.50 |
| Texas..... | 4.00 | 10.00 | Kansas | 2.50 | 4.00 |
| Montana | 4.00 | 9.00 | Virginia..... | 2.40 | 7.00 |
| Iowa | 4.00 | 8.00 | Kentucky..... | 2.00 | 8.75 |
| Georgia | 3.75 | 3.75 | Ohio..... | 1.88 | 7.44 |
| Oklahoma | 3.75 | 8.75 | South Dakota.... | 1.60 | 3.00 |
| Wyoming..... | 3.75 | 5.00 | | | |

^aTennessee commercial driver license information was not available at the time of the PennDOT survey.

Source: Developed from information provided by PennDOT.

APPENDIX G

Average Registration Fees for Four Typical Passenger Vehicles (As of April 1996)

| State | Rank - Based on the Average Fee for the Four Vehicle Types | 1994 Chevrolet | | 1994 Ford | | 1994 | |
|----------------------|--|----------------|------------|------------|-----------|----------------|------------|
| | | Cavalier | \$8,500 | Taurus | \$15,000 | Buick Park Ave | Ford F-150 |
| | | | | | | | |
| Rhode Island | \$937.42 | \$606.04 | \$1,046.55 | \$1,317.63 | \$ 779.47 | | |
| Mississippi | 569.83 | 350.27 | 591.34 | 884.45 | 453.26 | | |
| South Carolina | 510.75 | 327.00 | 572.00 | 721.00 | 423.00 | | |
| Missouri | 495.23 | 161.92 | 272.50 | 338.70 | 1,207.80 | | |
| Kansas | 466.69 | 247.55 | 423.80 | 820.35 | 375.05 | | |
| Washington | 384.11 | 240.06 | 398.22 | 590.51 | 307.63 | | |
| Connecticut | 351.67 | 235.73 | 387.70 | 481.22 | 302.03 | | |
| Montana | 348.38 | 222.75 | 390.25 | 490.25 | 290.25 | | |
| Maine | 343.00 | 226.00 | 382.00 | 478.00 | 286.00 | | |
| Nebraska | 328.96 | 201.36 | 298.85 | 467.06 | 348.57 | | |
| California | 309.50 | 206.00 | 336.00 | 416.00 | 280.00 | | |
| Georgia | 287.02 | 189.69 | 319.46 | 399.32 | 239.60 | | |
| Wyoming | 284.67 | 175.50 | 294.00 | 438.07 | 231.12 | | |
| West Virginia | 278.81 | 185.26 | 311.66 | 386.36 | 231.94 | | |
| Arizona | 273.25 | 167.20 | 283.64 | 425.21 | 216.95 | | |
| Utah | 236.42 | 141.83 | 235.84 | 350.14 | 217.88 | | |
| Minnesota | 214.25 | 120.50 | 201.50 | 376.50 | 158.50 | | |
| Nevada | 212.65 | 145.35 | 228.30 | 296.15 | 180.79 | | |
| Oklahoma | 202.50 | 129.50 | 209.50 | 306.50 | 164.50 | | |
| Colorado | 196.20 | 119.14 | 200.92 | 299.69 | 165.06 | | |
| Iowa | 191.85 | 117.00 | 198.40 | 296.00 | 156.00 | | |
| Kentucky | 179.34 | 124.55 | 208.35 | 259.91 | 124.55 | | |
| Hawaii | 95.68 | 81.50 | 91.95 | 99.75 | 109.50 | | |
| Alabama | 93.47 | 68.24 | 101.88 | 122.58 | 81.18 | | |
| New Jersey | 84.78 | 68.90 | 68.90 | 93.90 | 107.40 | | |

Appendix G (Continued)

| State | Rank - Based on the Average Fee for the Four Vehicle Types | | 1994 Chevrolet Cavalier \$8,500 | | 1994 Ford Taurus \$15,000 | | 1994 Buick Park Ave \$19,000 | | 1994 Ford F-150 \$11,000 | |
|---------------------------|--|--------------|------------------------------------|--------------|------------------------------|--------------|------------------------------------|--|--------------------------------|--|
| | | \$ | \$ | | \$ | | \$ | | \$ | |
| Michigan | | 81.50 | 52.00 | 81.00 | 133.00 | 60.00 | | | 60.00 | |
| DC | | 81.50 | 65.00 | 65.00 | 98.00 | 98.00 | | | 98.00 | |
| Texas | | 76.08 | 83.30 | 83.30 | 83.30 | 83.30 | | | 54.40 | |
| North Dakota | | 59.00 | 52.00 | 52.00 | 72.00 | 72.00 | | | 60.00 | |
| Tennessee | | 58.00 | 58.00 | 58.00 | 58.00 | 58.00 | | | 58.00 | |
| Illinois | | 48.00 | 48.00 | 48.00 | 48.00 | 48.00 | | | 48.00 | |
| Ohio | | 46.00 | 42.25 | 42.25 | 42.25 | 42.25 | | | 57.25 | |
| Vermont | | 43.00 | 43.00 | 43.00 | 43.00 | 43.00 | | | 43.00 | |
| Wisconsin | | 41.25 | 40.00 | 40.00 | 40.00 | 40.00 | | | 45.00 | |
| New Mexico | | 40.50 | 31.00 | 31.00 | 44.00 | 44.00 | | | 43.00 | |
| Florida | | 40.10 | 35.10 | 35.10 | 35.10 | 35.10 | | | 45.10 | |
| South Dakota | | 39.00 | 39.00 | 39.00 | 39.00 | 39.00 | | | 39.00 | |
| Maryland | | 38.38 | 35.00 | 35.00 | 35.00 | 35.00 | | | 48.50 | |
| Idaho | | 36.48 | 36.48 | 36.48 | 36.48 | 36.48 | | | 36.48 | |
| Alaska | | 36.25 | 35.00 | 35.00 | 35.00 | 35.00 | | | 40.00 | |
| New York | | 31.19 | 21.50 | 21.50 | 26.75 | 26.75 | | | 46.50 | |
| New Hampshire | | 28.20 | 19.20 | 19.20 | 31.20 | 31.20 | | | 31.20 | |
| Pennsylvania | | 27.75 | 24.00 | 24.00 | 24.00 | 24.00 | | | 39.00 | |
| Virginia | | 26.50 | 26.50 | 26.50 | 26.50 | 26.50 | | | 26.50 | |
| Arkansas | | 22.00 | 17.00 | 17.00 | 25.00 | 25.00 | | | 21.00 | |
| North Carolina | | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | | | 20.00 | |
| Delaware | | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | | | 20.00 | |
| Massachusetts | | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | | | 15.00 | |
| Oregon | | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | | | 15.00 | |
| Indiana | | 14.75 | 12.75 | 12.75 | 12.75 | 12.75 | | | 20.75 | |
| Louisiana | | 13.50 | 10.50 | 10.50 | 14.50 | 14.50 | | | 10.00 | |

Source: Developed from information provided by PennDOT.

APPENDIX H

Violation Categories, the Number of Total Safety Violations Found as a Result of MCSAP Inspections and the Number of Those Violations Which Were Out of Service Violations

| <u>Violation Categories</u> | <u>FY 1993-94</u> | | <u>FY 1994-95</u> | |
|--|-------------------|-----------------------|-------------------|-----------------------|
| | <u>Violations</u> | <u>OOS Violations</u> | <u>Violations</u> | <u>OOS Violations</u> |
| Medical Certificate | 2,600 | 0 | 5,342 | 0 |
| False Log Book..... | 453 | 242 | 860 | 470 |
| No Log/Log Not Current..... | 14,708 | 2,154 | 23,908 | 3,063 |
| 10/15 Hours..... | 1,663 | 506 | 2,458 | 586 |
| 15/20 Hours..... | 1 | 0 | 3 | 0 |
| 60/70/80 Hours..... | 280 | 233 | 430 | 259 |
| Other Hours of Service | 0 | 0 | 0 | 0 |
| Disqualified Drivers | 59 | 16 | 57 | 29 |
| Drugs..... | 4 | 3 | 11 | 10 |
| Alcohol..... | 16 | 14 | 30 | 20 |
| Seat Belt..... | 1,870 | 1 | 2,239 | 1 |
| Traffic Enforcement..... | 1,886 | 35 | 1,970 | 15 |
| Radar Detectors..... | 26 | 0 | 538 | 0 |
| Other Driver Violations..... | 21,058 | 2,138 | 32,978 | 2,780 |
| Brakes, Out of Adjustment..... | 6,813 | 3,162 | 3,494 | 1,602 |
| Brakes, All Other..... | 15,494 | 4,677 | 15,878 | 4,056 |
| Coupling Devices | 493 | 164 | 619 | 159 |
| Fuel Systems..... | 1,338 | 564 | 1,578 | 685 |
| Frames | 598 | 110 | 593 | 88 |
| Lighting..... | 26,546 | 2,811 | 35,744 | 3,453 |
| Steering Mechanism | 402 | 63 | 506 | 62 |
| Suspension | 2,538 | 1,359 | 2,780 | 1,473 |
| Tires..... | 8,232 | 1,745 | 9,504 | 1,838 |
| Wheels, Studs, Clamps..... | 648 | 226 | 780 | 280 |
| Load Securement..... | 1,565 | 1,118 | 1,480 | 960 |
| Windshield | 2,193 | 27 | 2,092 | 24 |
| Exhaust Discharge..... | 1,768 | 60 | 2,101 | 115 |
| Emergency Equipment..... | 6,834 | 38 | 8,415 | 21 |
| Periodic Inspection | 106 | 0 | 129 | 0 |
| Other Vehicle Defects..... | 22,635 | 3,532 | 35,712 | 7,900 |
| Shipping Paper | 821 | 174 | 933 | 223 |
| Improper Placarding..... | 504 | 102 | 629 | 145 |
| Accept. Shipment Improperly Marked | 18 | 3 | 12 | 1 |
| Improper Blocking and Bracing..... | 149 | 129 | 156 | 141 |
| No Retest & Inspection (Cargo Tank)..... | 70 | 1 | 49 | 0 |
| No Remote Shutoff..... | 19 | 0 | 7 | 0 |
| Use of Non-Specification Container..... | 98 | 11 | 119 | 5 |
| Emergency Response | 246 | 0 | 174 | 1 |
| All Other Haz Mat Violations | <u>550</u> | <u>66</u> | <u>798</u> | <u>68</u> |
| Total | 145,302 | 25,484 | 195,106 | 30,533 |

Source: Developed from MCSAP Violation Category Tables Provided by PennDOT's Division of Motor Carrier Safety.

APPENDIX I

Fiscal and Other Information on Pennsylvania's Mass Transit System

FY1990-91

| OPERATING REVENUES | | | | | | | | | | |
|--------------------|---------------------|------------|-----------------------------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| Fares and Other* | Operating Subsidies | | Free Transit & Ridesharing Grants | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
| | Federal | State | | | | | | | | |
| 1. SEPTA | 347,214,587 | 27,386,955 | 164,613,401 | 53,326,767 | 652,396,318 | 205,019,796 | 312,114,000 | 0.79 | 56,336,413 | 708,932,731 |
| 2. PAT | 89,349,962 | 8,000,677 | 59,476,250 | 19,825,438 | 175,321,329 | 28,367,469 | 86,956,000 | 1.00 | 28,320,412 | 233,340,208 |
| 3. AMTRAN | 814,816 | 795,535 | 186,390 | 98,499 | 2,185,077 | 289,837 | 981,000 | 1.10 | 31,798 | 2,216,875 |
| 4. BARTA | 3,438,102 | 1,304,653 | 549,131 | 147,042 | 6,737,181 | 1,298,253 | 4,042,000 | 0.50 | 442,015 | 7,179,196 |
| 5. BCTA | 1,020,159 | 314,124 | 687,039 | 359,550 | 2,742,740 | 361,868 | 562,000 | 2.42 | 265,644 | 3,008,384 |
| 6. Capitol Bus | 27,986 | 32,868 | 51,281 | 17,094 | 129,229 | 0 | 13,000 | 7.79 | 8,873 | 138,102 |
| 7. CAT | 2,631,538 | 1,210,650 | 1,168,633 | 389,544 | 5,839,691 | 439,326 | 3,804,000 | 0.73 | 492,878 | 6,333,569 |
| 8. CATA | 1,261,760 | 324,313 | 737,949 | 318,799 | 2,737,438 | 94,617 | 2,604,000 | 0.53 | 442,215 | 3,179,653 |
| 9. CCTA | 1,052,379 | 538,810 | 1,159,397 | 386,465 | 3,605,028 | 467,977 | 1,462,000 | 1.43 | 371,888 | 3,976,916 |
| 10. COLTS | 1,983,697 | 784,679 | 915,653 | 596,832 | 5,219,480 | 938,619 | 2,187,000 | 1.05 | 54,337 | 6,274,017 |
| 11. EMFTA | 2,817,490 | 1,000,444 | 1,252,521 | 732,186 | 6,431,239 | 628,598 | 4,041,000 | 0.74 | 124,028 | 7,981,899 |
| 12. LANFA | 3,033,126 | 2,517,385 | 900,004 | 290,243 | 7,883,529 | 1,142,771 | 3,918,000 | 0.95 | 98,370 | 9,981,108 |
| 13. LCTA | 1,777,896 | 947,505 | 761,700 | 982,942 | 5,910,298 | 1,040,255 | 2,702,000 | 1.00 | 50,810 | 5,961,108 |
| 14. MCVTA | 990,258 | 329,916 | 312,872 | 46,225 | 1,938,794 | 279,704 | 1,199,000 | 0.61 | 585,048 | 2,523,812 |
| 15. RRFTA | 1,965,265 | 893,398 | 376,732 | 114,000 | 3,822,575 | 473,180 | 2,265,000 | 0.36 | 327,909 | 4,150,484 |
| 16. SVSS | 89,247 | 122,731 | 60,831 | 25,000 | 327,999 | 30,100 | 119,000 | 1.75 | 36,449 | 374,446 |
| 17. Washington | 768,499 | 151,137 | 296,511 | 98,837 | 1,379,996 | 64,812 | 297,000 | 1.84 | 36,449 | 1,416,445 |
| 18. WPT | 611,808 | 310,301 | 665,412 | 190,000 | 1,955,727 | 178,206 | 1,211,000 | 0.96 | 36,449 | 1,992,176 |
| 19. WCTA | 389,349 | 231,200 | 299,685 | 174,895 | 1,233,346 | 138,217 | 222,000 | 3.18 | 36,449 | 1,269,795 |
| 20. YCTA | 621,019 | 768,935 | 421,608 | 245,208 | 2,207,612 | 150,842 | 793,000 | 1.81 | 36,449 | 2,244,061 |
| TOTAL | 462,258,943 | 47,966,216 | 234,893,000 | 80,363,566 | 919,722,984 | 94,239,259 | 430,804,000 | 0.84 | 87,862,378 | 1,007,585,362 |

| OPERATING REVENUES | | | | | | | | | | |
|--------------------|---------------------|-----------|-----------------------------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| Fares and Other* | Operating Subsidies | | Free Transit & Ridesharing Grants | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
| | Federal | State | | | | | | | | |
| 1. ATA -- | 217,403 | 505,047 | 289,534 | 129,278 | 1,507,011 | 365,749 | 347,334 | 2.66 | 87,862,378 | 1,594,823 |
| 2. BCTA -- | 23,726 | 30,467 | 19,642 | 9,720 | 104,877 | 21,322 | 12,855 | 4.65 | 87,862,378 | 136,704 |
| 3. BUTLER -- | 41,036 | 84,242 | 47,335 | 20,521 | 246,241 | 53,107 | 115,817 | 1.31 | 87,862,378 | 302,058 |
| 4. CART -- | 97,525 | 219,012 | 186,449 | 56,196 | 659,481 | 100,299 | 119,914 | 3.85 | 87,862,378 | 769,695 |
| 5. CATA -- | 51,867 | 76,361 | 34,356 | 18,954 | 241,411 | 59,873 | 153,376 | 0.85 | 87,862,378 | 300,787 |
| 6. COLT -- | 163,176 | 210,842 | 154,944 | 52,170 | 695,877 | 114,745 | 415,693 | 1.01 | 87,862,378 | 1,111,570 |
| 7. CTA -- | 0 | 5,977 | 4,483 | 1,494 | 11,954 | 0 | 0 | 0.00 | 87,862,378 | 11,954 |
| 8. CARBON -- | 2,820 | 39,784 | 30,948 | 8,980 | 90,406 | 7,874 | 11,907 | 6.69 | 87,862,378 | 102,280 |
| 9. DUFFAST -- | 34,941 | 71,273 | 30,496 | 16,296 | 197,904 | 44,898 | 30,904 | 1.22 | 87,862,378 | 238,802 |
| 10. EMFTA -- | 29,919 | 53,671 | 52,839 | 13,791 | 163,281 | 161,737 | 365,851 | 3.89 | 87,862,378 | 329,118 |
| 11. HTA -- | 93,947 | 264,027 | 194,369 | 65,546 | 744,266 | 226,377 | 353,514 | 1.43 | 87,862,378 | 1,097,782 |
| 12. ICTA -- | 138,666 | 115,951 | 110,099 | 28,487 | 422,516 | 29,313 | 335,414 | 1.22 | 87,862,378 | 757,930 |
| 13. MCTA -- | 166,269 | 300,084 | 283,998 | 81,021 | 940,911 | 109,539 | 85,057 | 1.98 | 87,862,378 | 1,026,849 |
| 14. MID-CO. -- | 49,715 | 63,786 | 36,190 | 17,072 | 210,527 | 43,764 | 220,430 | 0.23 | 87,862,378 | 253,287 |
| 15. MT. CARMEL -- | 11,145 | 35,667 | 7,772 | 12,909 | 144,050 | 72,216 | 91,615 | 0.62 | 87,862,378 | 155,665 |
| 16. NCATA -- | 200,303 | 396,251 | 349,173 | 105,888 | 1,259,181 | 207,566 | 653,901 | 1.30 | 87,862,378 | 1,913,082 |
| 17. POTTSWOWN | 153,226 | 140,579 | 46,663 | 37,480 | 528,027 | 81,770 | 243,717 | 1.20 | 87,862,378 | 671,744 |
| 18. STS -- | 225,864 | 68,968 | 66,361 | 17,173 | 813,411 | 15,118 | 89,544 | 1.70 | 87,862,378 | 899,955 |
| 19. TAWC -- | 40,770 | 28,806 | 32,687 | 7,937 | 107,509 | 9,935 | 54,340 | 1.28 | 87,862,378 | 161,849 |
| 20. VENANGO -- | 28,144 | 128,436 | 129,232 | 33,538 | 375,543 | 40,318 | 56,270 | 5.18 | 87,862,378 | 431,813 |
| 21. WCTA -- | 43,819 | 34,726 | 42,335 | 11,339 | 101,428 | 10,026 | 15,692 | 3.18 | 87,862,378 | 147,520 |
| 22. YORK -- | 3,002 | 3,023,141 | 2,256,272 | 804,545 | 9,768,377 | 1,867,136 | 4,031,714 | 1.51 | 87,862,378 | 10,600,102 |
| TOTAL | 1,817,283 | 4,023,141 | 2,256,272 | 804,545 | 9,768,377 | 1,867,136 | 4,031,714 | 1.51 | 87,862,378 | 10,600,102 |

Appendix I (Continued)

FY 1991-92

URBAN TRANSIT SYSTEMS

OPERATING REVENUES

| | Fares and Other* | | Operating Subsidies | | Free Transit & Ridesharing Grants | | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
|-------------------|------------------|-------------|---------------------|------------|-----------------------------------|-------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| | Federal | State | Local | State | Federal | State | | | | | | | |
| 1. SEPTA -- | 329,496,510 | 163,053,100 | 57,844,701 | 57,890,344 | 57,890,344 | 633,478,236 | 672,178,193 | 0.49 | 298,028,076 | 1.13 | 145,092,000 | 780,570,236 | |
| 2. PAT -- | 83,253,508 | 38,932,049 | 19,644,015 | 26,873,441 | 26,873,441 | 197,412,764 | 169,878,334 | 0.41 | 71,406,100 | 0.83 | 40,777,000 | 238,139,764 | |
| 3. AMTRAN -- | 828,924 | 525,375 | 444,461 | 307,395 | 307,395 | 2,206,083 | 2,025,734 | 0.67 | 924,369 | 1.16 | 209,000 | 2,415,083 | |
| 4. BARTA -- | 3,884,768 | 1,240,903 | 543,257 | 1,459,581 | 1,459,581 | 7,314,509 | 5,818,423 | 0.44 | 3,813,018 | 0.52 | 1,052,000 | 8,366,509 | |
| 5. BCTA -- | 1,062,339 | 299,976 | 679,690 | 338,636 | 338,636 | 2,442,841 | 2,427,594 | 0.26 | 552,405 | 2.43 | 396,000 | 3,130,841 | |
| 6. Capital Bus -- | 22,305 | 31,484 | 50,732 | 0 | 0 | 121,722 | 85,272 | 0.39 | 10,506 | 9.46 | 13,000 | 134,722 | |
| 7. CAT -- | 2,359,698 | 1,181,732 | 1,156,132 | 376,157 | 376,157 | 5,516,919 | 5,988,757 | 0.45 | 3,518,935 | 0.79 | 783,000 | 6,299,919 | |
| 8. CATA -- | 1,226,642 | 419,999 | 730,055 | 96,152 | 96,152 | 2,755,559 | 2,755,117 | 0.36 | 2,154,810 | 0.66 | 505,000 | 3,260,559 | |
| 9. CCTA -- | 1,101,257 | 335,931 | 1,146,995 | 546,359 | 546,359 | 3,712,874 | 3,038,452 | 0.42 | 1,298,742 | 1.59 | 397,000 | 4,109,874 | |
| 10. COLTS -- | 1,990,994 | 780,798 | 903,858 | 936,030 | 936,030 | 5,398,228 | 4,760,880 | 0.53 | 2,151,688 | 1.15 | 548,000 | 5,946,228 | |
| 11. EMTA -- | 2,880,351 | 1,000,000 | 1,239,125 | 566,413 | 566,413 | 6,402,214 | 4,764,733 | 0.60 | 3,978,995 | 0.74 | 704,000 | 7,106,214 | |
| 12. LAJTA -- | 5,090,372 | 2,514,133 | 890,377 | 2,556,521 | 2,556,521 | 11,348,395 | 9,367,637 | 0.54 | 4,306,831 | 0.86 | 1,101,000 | 12,449,395 | |
| 13. LCTA -- | 2,036,976 | 942,818 | 753,532 | 977,404 | 977,404 | 5,314,158 | 4,733,174 | 0.43 | 2,546,799 | 0.90 | 445,000 | 5,759,158 | |
| 14. MNVTA -- | 977,217 | 382,446 | 309,525 | 271,656 | 271,656 | 1,962,344 | 1,725,101 | 0.57 | 488,763 | 1.46 | 298,000 | 2,260,344 | |
| 15. RRTA -- | 1,985,909 | 990,000 | 372,702 | 469,591 | 469,591 | 3,942,754 | 3,337,290 | 0.60 | 2,229,403 | 0.67 | 379,000 | 4,321,754 | |
| 16. SVSS -- | 76,121 | 125,493 | 60,180 | 28,722 | 28,722 | 315,516 | 295,443 | 0.26 | 115,855 | 1.82 | 78,000 | 393,516 | |
| 17. Washington | 632,260 | 178,618 | 293,339 | 46,139 | 46,139 | 1,248,135 | 1,279,981 | 0.49 | 271,471 | 2.10 | 172,000 | 1,420,135 | |
| 18. WBT -- | 640,985 | 351,494 | 658,294 | 183,059 | 183,059 | 2,053,532 | 1,781,611 | 0.36 | 1,191,994 | 1.03 | 414,000 | 2,467,532 | |
| 19. WCTA -- | 417,084 | 231,935 | 296,479 | 170,482 | 170,482 | 1,234,063 | 1,086,755 | 0.38 | 231,672 | 2.88 | 104,000 | 1,338,063 | |
| 20. YCTA -- | 691,057 | 739,986 | 417,098 | 175,069 | 175,069 | 2,366,339 | 2,011,861 | 0.34 | 832,323 | 1.80 | 713,000 | 3,079,339 | |
| TOTAL | 448,655,677 | 483,764,453 | 232,933,000 | 82,634,904 | 94,269,151 | 898,869,185 | 900,040,342 | 0.49 | 408,625,755 | 0.89 | 184,120,000 | 1,092,989,185 | |

RURAL AND SMALL URBAN SYSTEMS

OPERATING REVENUES

| | Fares and Other* | | Operating Subsidies | | Free Transit & Ridesharing Grants | | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
|-------------------|------------------|-----------|---------------------|---------|-----------------------------------|------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| | Federal | State | Local | State | Federal | State | | | | | | | |
| 1. ATA -- | 242,495 | 280,291 | 95,183 | 359,043 | 359,043 | 1,664,823 | 1,717,289 | 0.14 | 346,588 | 3.07 | | 1,664,823 | |
| 2. BCTA -- | 26,570 | 40,775 | 31,765 | 18,830 | 18,830 | 138,538 | 157,597 | 0.17 | 12,514 | 7.57 | | 138,538 | |
| 3. BUTLER -- | 48,904 | 79,730 | 20,521 | 58,401 | 58,401 | 274,635 | 274,635 | 0.18 | 129,637 | 1.29 | | 274,635 | |
| 4. CART -- | 90,049 | 219,012 | 199,809 | 126,938 | 126,938 | 695,173 | 695,079 | 0.13 | 113,284 | 4.22 | | 695,173 | |
| 5. CATA -- | 56,154 | 102,038 | 37,115 | 54,546 | 54,546 | 268,694 | 268,694 | 0.21 | 152,942 | 0.99 | | 268,694 | |
| 6. COLT -- | 159,995 | 228,568 | 171,387 | 105,721 | 105,721 | 717,841 | 726,306 | 0.22 | 397,449 | 1.14 | | 717,841 | |
| 7. CTA -- | 26,923 | 15,719 | 25,764 | 2,167 | 2,167 | 79,161 | 79,161 | 0.34 | 7,569 | 6.62 | | 79,161 | |
| 8. CARBON -- | 3,957 | 25,960 | 49,508 | 11,607 | 11,607 | 107,560 | 107,560 | 0.04 | 24,359 | 3.78 | | 107,560 | |
| 9. DuFAST -- | 35,273 | 54,359 | 32,878 | 42,943 | 42,943 | 203,079 | 204,470 | 0.17 | 91,644 | 1.56 | | 203,079 | |
| 10. EMTA -- | 86,193 | 250,882 | 226,081 | 125,576 | 125,576 | 754,278 | 182,510 | 0.16 | 32,443 | 4.20 | | 754,278 | |
| 11. HVA -- | 136,928 | 156,465 | 130,230 | 26,564 | 26,564 | 478,674 | 520,256 | 0.26 | 226,908 | 1.39 | | 478,674 | |
| 12. ICTA -- | 150,032 | 191,703 | 248,297 | 114,531 | 114,531 | 787,191 | 798,168 | 0.17 | 302,517 | 1.73 | | 787,191 | |
| 13. MCTA -- | 39,273 | 78,594 | 43,147 | 39,902 | 39,902 | 215,899 | 233,660 | 0.17 | 85,055 | 1.61 | | 215,899 | |
| 14. MID-CO -- | 11,751 | 35,667 | 9,740 | 76,083 | 76,083 | 156,488 | 155,696 | 0.08 | 85,377 | 0.57 | | 156,488 | |
| 15. MT. CARMEL -- | 212,200 | 407,546 | 368,397 | 241,659 | 241,659 | 1,352,601 | 1,353,632 | 0.16 | 701,184 | 1.28 | | 1,352,601 | |
| 16. NCATA -- | 137,402 | 149,184 | 112,261 | 82,557 | 82,557 | 518,824 | 517,406 | 0.24 | 230,096 | 1.30 | | 518,824 | |
| 18. STS -- | 252,236 | 164,084 | 40,271 | 384,236 | 384,236 | 854,251 | 912,835 | 0.28 | 538,906 | 0.40 | | 854,251 | |
| 19. TAWC -- | 42,957 | 67,312 | 79,821 | 14,483 | 14,483 | 221,746 | 220,672 | 0.19 | 85,327 | 1.93 | | 221,746 | |
| 20. VENANGO -- | 33,118 | 20,539 | 28,162 | 13,985 | 13,985 | 104,791 | 104,482 | 0.32 | 47,866 | 1.21 | | 104,791 | |
| 21. WCTA -- | 49,255 | 140,671 | 140,369 | 38,156 | 38,156 | 442,719 | 442,569 | 0.11 | 57,505 | 6.18 | | 442,719 | |
| 22. YORK -- | 15,055 | 52,731 | 41,916 | 12,926 | 12,926 | 136,613 | 114,559 | 0.13 | 35,073 | 3.10 | | 136,613 | |
| TOTAL | 1,885,864 | 3,223,023 | 2,434,962 | 818,185 | 1,958,041 | 10,320,175 | 10,601,423 | 0.18 | 4,059,296 | 1.60 | 5,769,391 | 16,089,566 | |

Appendix I (Continued)

FY1992-93

URBAN TRANSIT SYSTEMS

OPERATING REVENUES

| | Fares and Other* | Operating Subsidies | | | Free Transit & Ridesharing Grants | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
|-------------------|------------------|---------------------|-------------|------------|-----------------------------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| | | Federal | State | Local | | | | | | | | |
| 1. SEPTA -- | 327,687,359 | 271,489,630 | 163,053,100 | 55,892,868 | 62,393,315 | 691,277,528 | 0.47 | 309,440,804 | 0.80 | 186,698,000 | 822,874,472 | |
| 2. PAI | 84,360,107 | 8,731,035 | 58,932,049 | 19,644,016 | 197,789,387 | 194,764,778 | 0.43 | 79,123,568 | 1.10 | 43,885,000 | 241,674,387 | |
| 3. AMTRAN -- | 3,737,146 | 1,368,660 | 543,257 | 190,716 | 2,792,252 | 2,201,283 | 0.37 | 864,537 | 1.30 | 609,000 | 2,833,290 | |
| 4. BARTA -- | 1,055,024 | 292,230 | 679,690 | 375,250 | 1,337,827 | 6,309,322 | 0.59 | 3,687,512 | 0.57 | 695,000 | 7,872,606 | |
| 5. BCTA -- | 20,995 | 32,908 | 50,732 | 16,911 | 0 | 2,515,515 | 0.42 | 562,984 | 2.39 | 381,000 | 3,090,529 | |
| 6. Capital Bus -- | 2,497,459 | 1,084,493 | 1,156,132 | 385,377 | 405,825 | 6,448,392 | 0.39 | 3,266,989 | 0.80 | 688,000 | 6,217,286 | |
| 7. CAT -- | 1,194,546 | 439,451 | 730,055 | 264,821 | 101,461 | 2,730,334 | 0.43 | 2,021,997 | 0.71 | 354,000 | 3,084,334 | |
| 8. CCTA -- | 1,162,969 | 437,159 | 1,146,995 | 383,158 | 464,917 | 3,189,271 | 0.36 | 1,398,227 | 1.41 | 412,000 | 4,007,198 | |
| 10. COLTS -- | 2,170,155 | 779,537 | 905,858 | 447,358 | 1,035,285 | 4,557,161 | 0.48 | 2,205,935 | 0.97 | 431,000 | 5,769,193 | |
| 11. EMTA -- | 2,647,791 | 1,000,000 | 1,239,125 | 465,810 | 409,926 | 5,853,761 | 0.45 | 3,628,969 | 0.75 | 797,000 | 6,559,652 | |
| 12. LANTA -- | 5,144,989 | 2,600,000 | 890,377 | 296,792 | 2,488,372 | 9,520,104 | 0.54 | 4,154,792 | 0.91 | 823,000 | 12,243,530 | |
| 13. LCTA -- | 1,923,987 | 941,295 | 753,552 | 616,723 | 892,882 | 4,641,343 | 0.41 | 2,364,398 | 0.98 | 805,000 | 5,933,439 | |
| 14. MMVTA -- | 923,864 | 399,580 | 309,525 | 21,500 | 251,992 | 1,906,461 | 0.53 | 464,661 | 1.57 | 230,000 | 2,136,461 | |
| 15. Potstown | 237,214 | 225,864 | 107,696 | 35,898 | 85,725 | 603,217 | 0.39 | 248,017 | 1.49 | 234,000 | 926,397 | |
| 16. RRTA -- | 3,516,842 | 1,089,000 | 372,702 | 118,552 | 1,238,851 | 6,335,947 | 0.70 | 2,515,501 | 0.63 | 525,000 | 6,860,947 | |
| 17. SVSS -- | 88,989 | 124,163 | 60,180 | 25,000 | 28,135 | 305,821 | 0.29 | 113,155 | 1.85 | 156,000 | 482,467 | |
| 18. Washington | 544,290 | 178,207 | 293,339 | 97,780 | 48,474 | 1,302,230 | 0.42 | 241,454 | 2.36 | 178,000 | 1,340,090 | |
| 19. WBT -- | 698,551 | 400,000 | 658,294 | 200,000 | 197,245 | 1,819,056 | 0.38 | 1,105,369 | 1.14 | 246,000 | 2,400,090 | |
| 20. WCTA -- | 395,778 | 204,458 | 296,479 | 167,154 | 160,983 | 1,081,454 | 0.37 | 244,559 | 2.73 | 314,000 | 1,538,832 | |
| 21. YCTA -- | 757,690 | 773,929 | 417,098 | 200,000 | 192,329 | 2,445,074 | 0.31 | 853,954 | 1.63 | 465,000 | 2,806,046 | |
| TOTAL | 441,590,940 | 48,824,663 | 233,040,696 | 79,948,002 | 98,442,511 | 948,478,810 | 0.47 | 418,517,448 | 0.86 | 238,940,000 | 1,140,786,812 | |

RURAL AND SMALL URBAN SYSTEMS

OPERATING REVENUES

| | Fares and Other* | Operating Subsidies | | | Free Transit & Ridesharing Grants | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
|-------------------|------------------|---------------------|-----------|---------|-----------------------------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| | | Federal | State | Local | | | | | | | | |
| 1. ATA -- | 245,957 | 756,592 | 266,115 | 88,705 | 343,493 | 1,813,944 | 0.14 | 340,884 | 3.26 | | 1,700,862 | |
| 2. BCTA -- | 30,536 | 44,852 | 19,666 | 25,590 | 21,198 | 164,281 | 0.19 | 14,492 | 6.22 | | 143,842 | |
| 3. BUTLER -- | 56,534 | 85,206 | 64,623 | 20,521 | 67,666 | 298,296 | 0.19 | 152,771 | 1.12 | | 294,550 | |
| 4. CART -- | 90,784 | 265,005 | 191,729 | 56,196 | 131,964 | 764,356 | 0.12 | 110,572 | 4.64 | | 735,678 | |
| 5. CATA -- | 60,617 | 95,885 | 35,080 | 11,693 | 46,988 | 258,342 | 0.23 | 146,456 | 0.97 | | 250,263 | |
| 6. COLT -- | 158,064 | 254,826 | 164,048 | 82,237 | 104,335 | 783,702 | 0.20 | 354,939 | 1.41 | | 763,510 | |
| 7. CTA -- | 52,601 | 34,485 | 24,757 | 8,358 | 3,619 | 136,510 | 0.39 | 20,523 | 3.29 | | 123,820 | |
| 8. CARBON -- | 6,177 | 32,028 | 47,945 | 15,982 | 13,447 | 115,579 | 0.05 | 27,012 | 3.55 | | 115,579 | |
| 9. DuFAST -- | 38,128 | 67,718 | 50,272 | 18,419 | 222,311 | 222,311 | 0.17 | 85,905 | 1.59 | | 222,311 | |
| 10. EMITA -- | 37,813 | 64,942 | 59,458 | 19,819 | 8,759 | 190,791 | 0.17 | 40,577 | 3.55 | | 190,791 | |
| 11. HTA -- | 79,277 | 216,404 | 217,847 | 72,616 | 105,222 | 735,840 | 0.11 | 305,445 | 1.66 | | 691,666 | |
| 12. ICTA -- | 161,663 | 139,183 | 125,585 | 30,717 | 26,468 | 543,558 | 0.30 | 229,483 | 1.29 | | 483,616 | |
| 13. MCTA -- | 188,560 | 273,434 | 238,112 | 87,004 | 118,827 | 905,937 | 0.21 | 305,018 | 1.96 | | 905,937 | |
| 14. MID-CO -- | 10,676 | 36,222 | 8,865 | 13,634 | 34,063 | 248,141 | 0.19 | 69,588 | 2.03 | | 223,308 | |
| 15. MT. CARMEL -- | 180,142 | 479,464 | 356,631 | 118,877 | 77,623 | 147,020 | 0.07 | 88,637 | 0.66 | | 147,020 | |
| 16. NCATA -- | 217,504 | 210,492 | 34,928 | 130,257 | 223,031 | 1,358,145 | 0.13 | 637,494 | 1.50 | | 1,358,145 | |
| 17. STS -- | 36,562 | 22,624 | 26,616 | 8,872 | 11,377 | 202,749 | 0.23 | 496,512 | 0.76 | | 979,029 | |
| 18. TAWC -- | 75,703 | 155,408 | 136,199 | 56,556 | 39,857 | 496,003 | 0.15 | 110,236 | 2.03 | | 202,749 | |
| 19. VENANGO -- | 17,154 | 48,217 | 40,488 | 13,496 | 10,272 | 135,010 | 0.13 | 41,863 | 5.00 | | 110,236 | |
| 20. WCTA -- | 1,855,226 | 3,433,557 | 2,227,304 | 910,482 | 1,809,693 | 10,830,763 | 0.17 | 3,666,873 | 2.44 | | 463,723 | |
| 21. YORK -- | | | | | | 10,830,763 | 0.17 | 41,863 | 1.79 | | 129,627 | |
| TOTAL | 1,855,226 | 3,433,557 | 2,227,304 | 910,482 | 1,809,693 | 10,830,763 | 0.17 | 3,666,873 | 1.79 | 4,939,722 | 15,175,984 | |

Appendix I (Continued)

FY 1993-94

URBAN TRANSIT SYSTEMS

OPERATING REVENUES

| | Fares and Other* | | Operating Subsidies | | Free Transit & Ridesharing Grants | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
|-------------------|------------------|------------|---------------------|------------|-----------------------------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| | Federal | State | Local | Other | | | | | | | | |
| 1. SEFTA -- | 334,780,862 | 27,221,238 | 166,456,302 | 56,949,746 | 65,877,570 | 651,283,938 | 676,649,420 | 0.49 | 306,916,918 | 0.82 | 162,593,000 | 813,878,938 |
| 2. PAT | 81,419,465 | 8,697,433 | 60,162,135 | 20,054,044 | 24,479,184 | 194,812,261 | 191,536,526 | 0.43 | 75,688,555 | 1.17 | 52,757,000 | 247,569,261 |
| 3. AMTRAN -- | 837,278 | 473,176 | 449,402 | 62,130 | 249,301 | 2,071,287 | 2,157,211 | 0.39 | 820,200 | 1.20 | 237,000 | 2,308,287 |
| 4. BARTA -- | 3,827,347 | 1,282,605 | 549,474 | 198,345 | 1,221,629 | 7,079,400 | 6,483,991 | 0.59 | 3,584,239 | 0.57 | 974,000 | 8,053,400 |
| 5. BCTA -- | 1,118,722 | 320,824 | 687,247 | 500,000 | 330,215 | 2,957,008 | 2,706,781 | 0.41 | 559,741 | 2.69 | 407,000 | 3,364,008 |
| 6. Capitol Bus -- | 19,832 | 32,545 | 51,292 | 17,097 | 0 | 120,766 | 84,921 | 0.23 | 9,050 | 11.15 | 15,000 | 135,766 |
| 7. CAT -- | 2,572,605 | 1,087,799 | 1,169,000 | 550,176 | 465,734 | 5,845,314 | 5,937,427 | 0.43 | 2,963,393 | 0.95 | 735,000 | 6,580,314 |
| 8. CATA -- | 1,248,408 | 360,272 | 738,161 | 254,354 | 100,117 | 2,701,312 | 2,811,352 | 0.44 | 1,949,299 | 0.69 | 326,000 | 3,027,312 |
| 9. CCTA -- | 1,182,682 | 350,546 | 1,159,677 | 386,559 | 451,400 | 3,530,864 | 3,357,479 | 0.35 | 1,531,285 | 1.24 | 543,000 | 4,073,864 |
| 10. COLTS -- | 2,007,480 | 781,588 | 915,943 | 693,648 | 921,062 | 5,319,721 | 4,900,114 | 0.43 | 2,010,283 | 1.19 | 700,000 | 5,800,721 |
| 11. EMITA -- | 2,793,219 | 1,041,729 | 1,252,920 | 493,177 | 392,785 | 5,975,830 | 5,752,154 | 0.49 | 3,185,869 | 0.88 | 481,000 | 6,675,830 |
| 12. LANITA -- | 5,189,516 | 2,700,000 | 900,357 | 310,200 | 2,438,289 | 11,538,362 | 9,813,126 | 0.53 | 4,123,876 | 0.95 | 816,000 | 12,354,362 |
| 13. LCTA -- | 1,939,391 | 908,781 | 761,980 | 293,356 | 919,888 | 4,823,396 | 4,274,400 | 0.50 | 1,973,591 | 1.00 | 499,000 | 5,322,396 |
| 14. MMVTA -- | 854,514 | 436,133 | 312,998 | 21,500 | 235,771 | 1,860,916 | 1,715,459 | 0.38 | 252,043 | 1.53 | 187,000 | 2,094,916 |
| 15. Posttown | 248,344 | 244,140 | 106,398 | 35,466 | 83,101 | 717,449 | 653,523 | 0.66 | 2,485,980 | 0.64 | 466,000 | 6,799,636 |
| 16. RRITA -- | 3,549,035 | 1,107,008 | 376,943 | 115,104 | 1,185,546 | 6,333,636 | 326,621 | 0.38 | 1,095,516 | 1.77 | 87,000 | 413,621 |
| 17. SVSS -- | 104,816 | 107,985 | 60,850 | 25,000 | 27,970 | 326,621 | 276,191 | 0.38 | 1,095,516 | 1.77 | 87,000 | 413,621 |
| 18. Washington | 540,433 | 180,223 | 296,628 | 98,876 | 48,440 | 1,164,600 | 1,084,174 | 0.50 | 1,889,959 | 2.94 | 168,000 | 1,332,600 |
| 19. WBT -- | 706,876 | 300,384 | 665,580 | 220,000 | 176,119 | 2,068,959 | 1,889,469 | 0.37 | 1,110,118 | 1.07 | 279,000 | 2,347,959 |
| 20. WCTA -- | 498,627 | 227,650 | 299,769 | 192,068 | 185,981 | 1,404,095 | 1,274,789 | 0.39 | 226,916 | 3.17 | 151,000 | 1,555,095 |
| 21. YCTA -- | 743,135 | 821,077 | 421,744 | 221,530 | 184,045 | 2,391,551 | 2,291,378 | 0.32 | 907,231 | 1.61 | 510,000 | 2,901,551 |
| TOTAL | 446,182,587 | 48,683,156 | 237,795,000 | 81,694,396 | 99,974,147 | 914,329,286 | 930,787,870 | 0.48 | 411,033,316 | 0.90 | 223,165,000 | 1,137,494,286 |

RURAL AND SMALL URBAN SYSTEMS

OPERATING REVENUES

| | Fares and Other* | | Operating Subsidies | | Free Transit & Ridesharing Grants | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
|-------------------|------------------|-----------|---------------------|---------|-----------------------------------|-------------------------|--------------------------|---|------------------|---------------------------------|----------------------------|---------------|
| | Federal | State | Local | Other | | | | | | | | |
| 1. ATA -- | 264,362 | 783,582 | 276,832 | 92,277 | 348,593 | 1,766,046 | 1,831,526 | 0.14 | 327,576 | 3.52 | | 1,766,046 |
| 2. BCTA -- | 29,629 | 49,338 | 20,458 | 6,819 | 26,789 | 133,033 | 179,318 | 0.17 | 13,053 | 5.87 | | 133,033 |
| 3. BUTLER -- | 66,332 | 104,686 | 67,225 | 20,521 | 77,754 | 336,518 | 343,738 | 0.19 | 182,121 | 1.06 | | 336,518 |
| 4. CART -- | 86,773 | 288,672 | 199,450 | 56,196 | 113,711 | 744,802 | 755,476 | 0.11 | 104,614 | 5.20 | | 744,802 |
| 5. CATA -- | 65,411 | 105,481 | 36,492 | 12,164 | 43,199 | 262,747 | 276,373 | 0.24 | 145,774 | 1.06 | | 262,747 |
| 6. COLT -- | 169,331 | 350,438 | 170,654 | 56,885 | 96,982 | 844,290 | 870,207 | 0.19 | 309,738 | 1.87 | | 844,290 |
| 7. CTA -- | 52,587 | 33,985 | 25,754 | 8,585 | 4,533 | 125,444 | 125,444 | 0.42 | 17,982 | 3.80 | | 125,444 |
| 8. CARBON -- | 7,761 | 35,418 | 49,876 | 16,625 | 14,476 | 124,156 | 230,355 | 0.06 | 25,363 | 4.02 | | 124,156 |
| 9. DuFAST -- | 47,842 | 64,414 | 52,297 | 18,251 | 47,551 | 230,355 | 230,355 | 0.21 | 85,049 | 1.59 | | 230,355 |
| 10. EMITA -- | 47,816 | 71,436 | 61,852 | 13,791 | 14,481 | 209,376 | 231,863 | 0.21 | 47,373 | 3.10 | | 209,376 |
| 11. HTA -- | 89,544 | 229,604 | 226,620 | 65,546 | 163,844 | 775,158 | 775,158 | 0.12 | 272,758 | 1.91 | | 775,158 |
| 12. ICTA -- | 161,322 | 153,101 | 130,642 | 28,487 | 31,316 | 504,868 | 574,282 | 0.28 | 232,044 | 1.35 | | 504,868 |
| 13. MCTA -- | 183,650 | 247,701 | 247,701 | 82,567 | 186,104 | 931,333 | 931,333 | 0.20 | 266,946 | 2.10 | | 931,333 |
| 14. MID-CO -- | 37,815 | 95,098 | 42,943 | 14,314 | 33,455 | 223,625 | 236,413 | 0.16 | 65,321 | 2.33 | | 223,625 |
| 15. MT. CARMEL -- | 10,235 | 34,302 | 9,222 | 3,074 | 90,283 | 147,116 | 158,907 | 0.06 | 88,270 | 0.53 | | 147,116 |
| 16. NCATA -- | 243,755 | 659,405 | 370,993 | 123,664 | 227,824 | 1,570,724 | 1,614,142 | 0.12 | 649,292 | 1.78 | | 1,570,724 |
| 17. STS -- | 34,108 | 70,529 | 80,164 | 17,173 | 431,490 | 1,005,086 | 1,259,987 | 0.19 | 467,323 | 0.71 | | 1,005,086 |
| 18. TAWC -- | 12,751 | 54,141 | 42,118 | 14,039 | 10,886 | 133,935 | 141,392 | 0.13 | 74,528 | 4.64 | | 133,935 |
| 19. VENANGO -- | 34,179 | 27,688 | 9,229 | 11,166 | 13,139 | 107,154 | 107,154 | 0.32 | 45,145 | 1.33 | | 107,154 |
| 20. WCTA -- | 170,949 | 141,684 | 33,538 | 47,609 | 10,886 | 468,273 | 558,472 | 0.13 | 24,873 | 4.43 | | 468,273 |
| 21. YORK -- | 12,751 | 54,141 | 42,118 | 14,039 | 10,886 | 133,935 | 141,392 | 0.09 | 74,528 | 4.64 | | 133,935 |
| TOTAL | 1,908,334 | 3,890,203 | 2,317,000 | 705,837 | 2,035,585 | 10,857,179 | 11,570,538 | 0.16 | 3,520,271 | 1.96 | 5,290,559 | 16,147,738 |

Appendix I (Continued)

FY1994-95

URBAN TRANSIT SYSTEMS

OPERATING REVENUES

| | Fares and Other* | Federal | Operating Subsidies State | Local | Free Transit & Ridesharing Grants | Total Operating Revenue | Total Operating Expenses | Fares & Other Revenues/ Operating Expenses | Total Passengers | Operating Subsidy Per Passenger | Capital Revenue from State | Total Revenue |
|-------------------|------------------|------------|---------------------------|------------|-----------------------------------|-------------------------|--------------------------|--|------------------|---------------------------------|----------------------------|---------------|
| 1. SEPTA -- | 341,733,276 | 24,098,203 | 171,450,300 | 58,833,255 | 65,830,228 | 661,945,262 | 689,398,808 | 0.50 | 292,578,565 | 0.87 | 186,092,000 | 848,037,262 |
| 2. PAT | 783,900,572 | 7,710,758 | 61,967,037 | 20,655,678 | 24,799,660 | 193,483,705 | 198,949,600 | 0.39 | 75,088,671 | 1.20 | 46,811,000 | 240,294,705 |
| 3. AMTRAN -- | 764,358 | 605,000 | 460,950 | 115,127 | 223,297 | 2,168,732 | 2,034,198 | 0.37 | 777,422 | 1.52 | 256,000 | 2,424,732 |
| 4. BARTA -- | 3,841,321 | 1,669,548 | 576,986 | 218,530 | 1,276,342 | 7,582,727 | 6,871,050 | 0.68 | 3,602,674 | 0.68 | 1,235,000 | 8,817,727 |
| 5. BCTA -- | 1,208,282 | 281,119 | 705,018 | 668,000 | 348,823 | 3,211,242 | 2,907,545 | 0.42 | 576,412 | 2.87 | 415,000 | 3,626,242 |
| 6. Capital Bus -- | 20,429 | 0 | 52,236 | 17,412 | 0 | 90,077 | 83,048 | 0.23 | 8,780 | 7.93 | 15,000 | 105,077 |
| 7. CAT -- | 2,911,919 | 991,809 | 1,200,211 | 400,070 | 462,430 | 5,966,439 | 5,967,749 | 0.49 | 2,936,897 | 0.89 | 1,068,000 | 7,054,439 |
| 8. CATA -- | 1,324,159 | 254,381 | 755,985 | 259,111 | 104,337 | 2,697,973 | 2,811,374 | 0.47 | 1,932,888 | 0.65 | 321,000 | 3,018,973 |
| 9. CCTA -- | 1,118,580 | 343,746 | 1,184,128 | 394,709 | 438,836 | 3,679,999 | 3,233,280 | 0.35 | 1,494,481 | 1.42 | 469,000 | 4,148,999 |
| 10. COLTS -- | 1,879,198 | 691,918 | 941,316 | 595,302 | 930,660 | 5,038,394 | 4,400,869 | 0.43 | 1,927,900 | 1.16 | 499,000 | 5,537,394 |
| 11. EMTA -- | 2,861,778 | 1,011,044 | 1,285,900 | 518,421 | 393,107 | 6,070,250 | 6,182,324 | 0.46 | 3,165,890 | 0.89 | 1,047,000 | 7,117,250 |
| 12. LANTA -- | 5,643,051 | 2,750,000 | 941,220 | 517,554 | 2,703,654 | 12,555,459 | 10,532,274 | 0.54 | 4,074,844 | 1.03 | 927,000 | 13,482,459 |
| 13. LCTA -- | 1,737,763 | 661,773 | 784,469 | 261,490 | 812,220 | 4,277,715 | 3,462,008 | 0.51 | 1,787,823 | 0.96 | 471,000 | 4,748,715 |
| 14. MMVTA -- | 855,154 | 440,862 | 322,943 | 21,500 | 238,261 | 1,878,720 | 1,725,256 | 0.50 | 444,144 | 1.77 | 196,000 | 2,074,720 |
| 15. Pottdown | 262,241 | 230,289 | 109,356 | 32,924 | 87,656 | 722,466 | 723,422 | 0.36 | 274,731 | 1.36 | 191,000 | 913,466 |
| 16. RKTA -- | 3,741,729 | 1,151,000 | 402,302 | 114,000 | 1,097,675 | 6,506,706 | 5,520,755 | 0.68 | 2,454,299 | 0.68 | 1,081,000 | 7,587,706 |
| 17. SVSS -- | 90,246 | 103,509 | 62,479 | 25,000 | 24,536 | 305,770 | 270,269 | 0.33 | 107,757 | 1.77 | 58,000 | 363,770 |
| 18. Washington | 532,853 | 141,703 | 51,000 | 17,000 | 34,446 | 777,002 | 1,039,982 | 0.51 | 170,209 | 1.23 | 154,000 | 931,002 |
| 19. WBT -- | 706,494 | 377,590 | 680,116 | 190,000 | 181,826 | 2,136,026 | 2,030,274 | 0.35 | 1,108,796 | 1.13 | 587,000 | 2,723,026 |
| 20. WCTA -- | 463,432 | 196,103 | 306,814 | 126,197 | 206,324 | 1,298,870 | 1,215,303 | 0.38 | 235,673 | 2.67 | 117,000 | 1,415,870 |
| 21. YCTA -- | 1,215,570 | 653,261 | 433,346 | 205,000 | 222,129 | 2,729,306 | 2,559,636 | 0.52 | 998,401 | 1.29 | 291,000 | 3,020,306 |
| TOTAL | 451,282,405 | 44,563,616 | 244,674,112 | 84,186,280 | 100,416,427 | 925,122,840 | 931,739,024 | 0.47 | 395,757,157 | 0.94 | 342,321,000 | 1,167,443,840 |

RURAL AND SMALL URBAN SYSTEMS

Individual system statistics for FY1994-95 not available at time of report.

Source: Developed from PennDOT's Urban Mass Transit Statistical Reports and Small Urban Public Transportation Program Statistical Reports.

APPENDIX J

PennDOT's Tort Liability

The Sovereign Immunity Act, 42 Pa. C.S.A. §8521 *et seq.*, waives immunity for the Commonwealth in nine specified areas limiting liability to \$250,000 to each plaintiff for any one incident and an aggregate total of \$1,000,000 for the incident.¹ Four of these nine areas are related to PennDOT activities. These are vehicle liability, dangerous conditions of Commonwealth real estate (e.g., highways), potholes and other dangerous conditions of Commonwealth highways (pothole liability is limited to personal injury) and care, custody and control of personal property.

For incidents which occurred between FY 1989-90 and March 28, 1996, the Department has paid out over \$35.1 million in tort claims (incidents which occurred in more recent years may not yet have reached settlement or judgment). During this same period, \$108 million was paid out in total for tort claims. These payments include claims for incidents which occurred prior to FY 1989-90. These include pre-litigation claims, i.e., claims which have not resulted in the filing of a lawsuit, and litigation claims, i.e., those claims for which a lawsuit has been filed. Pre-litigation claims, which constitute the majority of claims filed against the Department, are normally claims for property damage or minor personal injuries and are resolved by the Bureau of Risk and Insurance Management (BRIM) in the Department of General Services.

As shown on Table J.1 the number of incidents which occurred in each of the categories for which PennDOT is liable has increased each year except in FY 1991-92 when the incidents declined from the prior year. Total claims filed for incidents which occurred in FY 1994-95 were double what they were in FY 1989-90. Table J.2 shows the payments made by the Department each year since FY 1989-90 for incidents which occurred in that year, and Table J.3 shows all payments made in each year. Since the claims filed in more recent years may not have reached settlement or judgment, trends are not readily apparent.

The position of the Risk Management Engineer was established in 1986 to address tort liability and risk management issues. The Engineer reviews open and closed claims and recommends policies, procedures, or activities aimed at preventing future claims. Directives related to the risk management/tort liability process have been issued to the districts as risk management letters since October 11, 1990 and include directives related to the handling of tort claims from the time they are filed until they are closed by judgment or settlement, the collection of data in anticipation of a claim, the response to interrogatives and depositions, and the dissemination of data from closed claims.

¹This does not include or limit delay damages awarded under Pa. R.C.P., Rule 238. The court in Woods v. Commonwealth Department of Transportation, 612 A.2d 970 (1992), held that those damages are awardable based upon the verdict as rendered, rather than any reduction of verdict resulting from the limiting provisions of the Sovereign Immunity Act.

Appendix J (Continued)

Table J.1

Claims Filed Against PennDOT Under the Exceptions to Sovereign Immunity*

| Fiscal Year | Cat 1 ^a | Cat 3 ^b | Cat 4 ^c Pothole | Cat 4 ^d Tar & Chip | Cat 4 ^e Painting | Cat 4 ^f Oily Surface | Cat 4 Total ^g | Cat 5 ^h | Total |
|---------------------------|--------------------|--------------------|-------------------------------|----------------------------------|--------------------------------|------------------------------------|-----------------------------|--------------------|--------------|
| 1989-90 | 708 | 49 | 4 | 312 | 35 | 34 | 745 | 8 | 1,510 |
| 1990-91 | 550 | 38 | 5 | 880 | 5 | 7 | 1,238 | 3 | 1,829 |
| 1991-92 | 623 | 30 | 6 | 621 | 17 | 7 | 1,054 | 2 | 1,709 |
| 1992-93 | 891 | 19 | 5 | 432 | 109 | 4 | 1,036 | 3 | 1,949 |
| 1993-94 | 1,072 | 26 | 0 | 637 | 274 | 6 | 1,506 | 3 | 2,607 |
| 1994-95 | 567 | 18 | 0 | 623 | 980 | 153 | 2,480 | 0 | 3,065 |
| 1995-96 ⁱ | <u>322</u> | <u>7</u> | <u>0</u> | <u>595</u> | <u>696</u> | <u>3</u> | <u>1,556</u> | <u>2</u> | <u>1,887</u> |
| Total..... | 4,733 | 187 | 20 | 4,100 | 2,116 | 214 | 9,615 | 21 | 14,556 |

*Information provided by loss dates, i.e., the date of incident. Differences in numbers on PennDOT Tort Status reports and this table are attributed to the daily activity during the period between the reports used by PennDOT and those provided to LB&FC by the Bureau of Risk and Insurance Management.

^aVehicle liability.

^bPersonal property.

^cPotholes or sinkholes.

^dTar and chip surface treatment.

^ePainting operation.

^fOily surface related to previous tar and chip operation.

^gThis includes specific category 4 conditions listed and all other dangerous conditions, e.g., shoulder drop off, guiderail, etc.

^hPotholes; does not include property damage.

ⁱThrough March 28, 1996.

Source: Developed from information provided by the Bureau of Risk and Insurance Management.

Appendix J (Continued)

Table J.2

Settlements and Judgments Paid by PennDOT Under the Exceptions to Sovereign Immunity*
By Loss Date^a

| | FY95-96 ^c | FY94-95 | FY93-94 | FY92-93 | FY91-92 | FY90-91 | FY89-90 | Total |
|---------------------------------|----------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| Cat 1 ^d | \$173,158 | \$ 423,350 | \$ 836,638 | \$1,023,921 | \$1,118,381 | \$ 878,089 | \$ 1,457,837 | \$ 5,911,374 |
| Cat 3 ^e | 2,888 | 9,719 | 26,181 | 18,874 | 18,397 | 31,268 | 90,485 | 197,812 |
| Cat 4: | | | | | | | | |
| Pothole ^f | 0 | 0 | 0 | 9,998 | 25,496 | 6,271 | 287,750 | 329,515 |
| Tar & Chip ^g | 159,988 | 151,810 | 167,619 | 281,331 | 261,275 | 300,719 | 270,029 | 1,592,771 |
| Painting ^h | 158,496 | 240,896 | 55,469 | 25,332 | 5,225 | 524 | 7,879 | 493,821 |
| Oily Surface ⁱ | 1,160 | 45,955 | 860 | 5,542 | 254,568 | 3,378 | 167,381 | 478,844 |
| Total ^j | 402,378 | 667,898 | 2,972,264 | 4,137,183 | 5,093,861 | 5,418,526 | 10,072,111 | 28,764,221 |
| Cat 5 ^k | 402 | 0 | 3,027 | 344 | 8,500 | 1,000 | 216,971 | 230,244 |
| Total | \$578,826 | \$1,100,967 | \$3,838,111 | \$5,180,321 | \$6,239,139 | \$6,328,883 | \$11,837,403 | \$35,103,650 |

Table J.3

By Status Date^b

| | FY95-96 ^c | FY94-95 | FY93-94 | FY92-93 | FY91-92 | FY90-91 | FY89-90 | Total |
|---------------------------------|----------------------|--------------|--------------|--------------|--------------|-------------|--------------|---------------|
| Cat 1 ^d | \$ 829,205 | \$ 1,266,103 | \$ 1,605,422 | \$ 865,683 | \$ 1,355,824 | \$ 939,289 | \$ 1,958,021 | \$ 8,819,547 |
| Cat 3 ^e | 20,754 | 16,697 | 24,827 | 30,922 | 210,887 | 19,811 | 27,620 | 351,518 |
| Cat 4: | | | | | | | | |
| Pothole ^f | 211,222 | 6,000 | 198,081 | 245,414 | 496,617 | 84,021 | 471,758 | 1,713,113 |
| Tar & Chip ^g | 358,430 | 391,103 | 215,399 | 652,014 | 493,056 | 412,113 | 596,649 | 3,118,764 |
| Painting ^h | 188,303 | 235,442 | 46,252 | 13,309 | 3,870 | 1,042 | 9,536 | 497,754 |
| Oily Surface ⁱ | 5,740 | 138,571 | 389,451 | 467,252 | 26,057 | 256,935 | 327,234 | 1,611,240 |
| Total ^j | 12,969,071 | 13,620,955 | 16,508,078 | 20,022,438 | 10,557,676 | 7,609,010 | 16,246,703 | 97,533,931 |
| Cat 5 ^k | 652 | 62,250 | 18,324 | 102,575 | 661,066 | 253,045 | 173,563 | 1,271,475 |
| Total | \$13,819,682 | \$14,966,006 | \$18,156,651 | \$21,021,618 | \$12,785,453 | \$8,821,154 | \$18,405,907 | \$107,976,471 |

*Differences in numbers on PennDOT Tort Status reports and this table are attributable to the daily activity during the period between the reports used by PennDOT and those provided to LB&FC by the Bureau of Risk and Insurance Management. ^aInformation provided by loss dates, i.e., the date of the incident. Incidents which occurred in more recent years may not have reached settlement or judgment by March 28, 1996. ^bInformation provided by status date, i.e., the last date an action occurred on a case. ^cThrough March 28, 1996. ^dVehicle liability. ^ePersonal property. ^fPotholes or sinkholes. ^gTar and chip surface treatment. ^hPainting operation. ⁱOily surface related to previous tar and chip operation. ^jThis includes specific category 4 conditions listed and all other dangerous conditions, e.g., shoulder drop off, guiderail, etc. ^kPotholes. Source: Developed from information provided by the Bureau of Risk and Insurance Management.

APPENDIX K

Response to This Report



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
HARRISBURG, PENNSYLVANIA 17120

OFFICE OF
SECRETARY OF TRANSPORTATION

June 24, 1996

Mr. Philip R Durgin, Executive Director
Legislative Budget and Finance Committee
Room 400, Finance Building

Dear Mr. Durgin:

Thank you for providing the Department of Transportation with a copy of your draft report on the "Performance Audit, Department of Transportation, Pursuant to Act 1981-35".

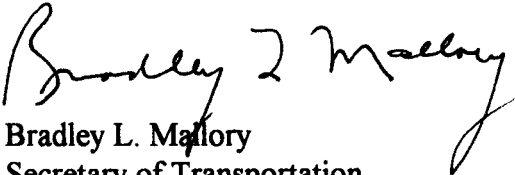
You and your staff are to be commended for the quality of the report. We appreciate the difficulty of the effort required to produce a balanced, honest and impartial report and we are impressed with the comprehensive nature in which the issues were researched and presented. Your report will assist us in our continuous improvement of the Department's operations, performance and management as we have done in the past.

I am encouraged that in this third major review of the Department's performance that your staff found many positive actions that reflect credit on the Department.

In the attachment, we have briefly commented on the findings and recommendations. We welcome the performance audit as a useful tool in our common objective of performing well for our citizen-customers throughout the Commonwealth of Pennsylvania.

I will be attending the meeting scheduled June 26, 1996, at 9:00 a.m. in Room 8E-B of the Capitol East Wing.

Sincerely,


Bradley L. Mallory
Secretary of Transportation

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----------|--|--------------------|--|
| 6 | <p>A1. <u>A Modest Increase in Highway Maintenance Spending Has Yielded Some Improvement in Road Conditions, But Over Half the Roads Remain in Poor or Very Poor Condition.</u></p> <p><u>Conclusion</u>- In terms of constant dollars between FFY 1989 and 1994 maintenance spending increased 2.0 percent. During the same period roads rated as poor or very poor declined 2.7 percent and roads rated as good or very good increased 1.3 percent. However in 1994, 52.1 percent of the roads were still rated as poor or very poor.</p> | Agree | Increased maintenance expenditures will yield better roads. |
| 12 | <p>A2. <u>County Maintenance Funding, Which Is Determined Through a Statutory Formula, Is Inequitable and Bears Little Relationship to Actual Highway Needs</u></p> <p><u>Conclusion</u> - County maintenance monies are based on a formula established in Act 1980-68. Because the formula is based on a historic base allocation and other factors, counties with better roads on an average receive more money on a per lane mile and needs basis, than counties with worse roads. This discrepancy will continue to grow until the maintenance allocation formula is changed to give greater emphasis to actual highway needs.</p> <p><u>Recommendation</u> - General Assembly should amend the maintenance allocation formula, requesting PennDOT to develop alternate formulas. The new allocation formula could be phased in over a multi-year period to ease the transition.</p> | | <p>The LB&FC makes no mention of the "hold harmless" appropriation which was introduced by the General Assembly in 1985-86 to make sure that no county got less funding than in the prior year. This appropriation prevents much of the needs-based distribution of funds that was intended in Act 68. Currently, about 57 percent of the highway maintenance formula still is subject to base allocation. Without the hold harmless appropriation all of the remaining 43 percent could be distributed according to the needs-based factors. The hold harmless appropriation could be phased-out over a two to three year period. After this initial step, PennDOT could work with the General Assembly to replace the base allocation with a more equitable distribution methodology.</p> <p>*LB&FC Note: The "hold harmless" provision is mentioned briefly in the Finding. Hold harmless monies, in the first year the provision was triggered, represented only about 1 percent of all monies distributed. The provision was triggered in five years and averaged only about 5 percent of the monies distributed in those respective years.</p> |

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG | NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----|-----|--|--------------------|---|
| 25 | A3. | <p><u>PennDOT Does Not Have a Standard Methodology to Determine Whether to Perform Maintenance Work In-House or by Contract</u></p> <p><u>Conclusion</u> - PennDOT does not have a standard methodology in place. Decisions to contract out appear to be driven largely by personnel and equipment constraints at county maintenance districts rather than by an analysis of the merits of alternative approaches.</p> <p><u>Recommendation</u> - PennDOT should develop and implement a standard methodology for determining whether to perform maintenance work in-house or by contract. This methodology should consider economic and noneconomic factors. PennDOT must be willing to increase resources when the conclusion leads to an in-house exercise. When few qualified contractors are available, PennDOT, should retain significant in-house capabilities to ensure meaningful baseline cost comparison information.</p> | Agree | <p>A methodology and the necessary software have been developed. The methodology considers costs, time criticality, availability of contractors, volume of work, time sensitivity to planning, need for specialized equipment, inspection requirements, etc. Seasonal programs must be very carefully analyzed before in-house option is increased. The Strategic Management Committee has accepted the new methodology. Initial field analysis will be performed on ten activities by the counties and will be reviewed in the four year business plan in Fall 1996.</p> |
| 35 | A4. | <p><u>Highway Consulting Costs Are Escalating</u></p> <p><u>Conclusion</u> - Highway consulting costs have escalated from 6.5 percent of construction and betterment costs in FY 1989-90 to 10.2 percent in FY 1994-95. Environmental and cultural impact statements, in particular, sometimes take five to ten years to complete. For some complex projects these studies begin before funding is secured. If the project funding is delayed these studies may become dated, thus requiring new studies.</p> | Agree | <p>There has been a growing number of complex statutory and regulatory requirements for both planning and environmental considerations. These requirements now occupy a significant place in all phases of project development which has resulted in cost and time implications.</p> <p>The number of projects and costs appear accurate. On page 66 Anthony Erdman Associate should be Erdman Anthony. The final paragraph on page 66 which addresses environmental delays is not fully stated. Some internal Departmental review time is also required for all documents for Quality Assurance purposes. This activity is required as per PennDOT's federal aid agreement which delegates certain authority. Outside agencies should not be exclusively cited for lengthy delays in processing reports.</p> |

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----------|--|--------------------|--|
| 41 | <p>A5. <u>County Maintenance Managers Have Had Only Limited Input Into County Maintenance Plans and the Allocation of Resources, but Changes are Underway</u></p> <p><u>Conclusion</u> - While county managers have day-to-day decision-making authority, most have little input into county maintenance plans or decisions to allocate resources. These are largely performed at the central office and engineering district level. Personnel and equipment are also highly centralized. As a result, county managers are limited in means to optimize resources for meeting their county's needs.</p> <p><u>Recommendation</u> - PennDOT should explore ways to grant county managers more autonomy over county resources. PennDOT should consider: 1) A bottom-up approach to building the annual work plan; 2) Granting county managers independent authority to move budgeted monies between major objects of expenditures; 3) Requiring engineering districts to consult with county managers before transferring funds; 4) Allowing county managers discretionary authority over a small portion of their equipment budget; and 5) Granting county managers authority to hire and fire temporary personnel within reasonable limits.</p> | Disagree | <p>Many county managers and assistant managers prioritize the roads that need work. They generate the annual work plan quantities and the 213 program (surface treatment) projects. District involvement is greater on the betterment projects which involve larger amounts of money. County input may be limited in a few of the eleven engineering districts. Our overall policy is to move from seal coats to the more durable treatments. The 1997-98 budget instructions are being developed to permit the districts and counties to submit an alternate program/budget scenario that could vary from central office production targets. In regards to the recommendations we agree with numbers 1, 3 and 4. We disagree and offer the following comments to numbers 2 and 5: #2) Restrictions on moving monies are often dictated by policies and requirements of agencies other than PennDOT; to ensure compliance this activity is centralized; #5) The Districts have been granted authority to dismiss temporary employees. Contrary to the report statement these dismissals are not required to be handled through the central office. However, the discharge of permanent employees must not only be recommended through the central office, but the Department must obtain approval from the Office of Administration to discharge permanent employees. Also, new language in the AFSCME agreement effective 1 July 1996 will permit counties to have employees report directly to the job site rather than travel on the Department's time from a stockpile to the job site. As a result, productivity should increase since employees will spend more time at the work site during their scheduled shift. While the prohibition on working on four-lane highways on Friday will still be in the agreement, the Department does intend to discuss the issue with AFSCME to determine if some improvements can be realized in this regard. Finally, about the comment that the foreman is a union position, such coverage is extended to first-level supervisors by Act 195, the Public Employees Relations Act. As a result, legislative action would be required to remove them from coverage.</p> |
| | | | <p>*LB&FC Note: The change was made in the final version of the report.</p> |

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----------|---|--------------------|--|
| 47 | <p>A6. <u>13.8% of PennDOT's Maintenance Money Was Used to Support The Central and Engineering District Offices in FY 1994-95.</u></p> <p><u>Conclusion</u> - Between FY 1989-90 and FY 1994-95, 13.5 percent of all maintenance monies (state and federal) were used to support the eleven engineering districts and central office. In FY 1994-95, the engineering districts and central office expended 13.8% of all maintenance monies. Some of these expenditures appear to be only indirectly related to highway maintenance functions.</p> | | <p>We concur that the monies used for engineering district and central office support of the Highway Maintenance Program should continue to be closely scrutinized in PennDOT's budget process. As indicated in the data included by LB&FC, engineering district and central office support costs as a percentage of total maintenance spending declined from 14.5 percent in 1993-94 to 13.8 percent in 1994-95.</p> <p>In addition, the Department will continue to review the mature of the activities that are charged to engineering district and central office budgets. It should be noted that PennDOT's highway programs are largely funded from four major operating appropriations. Therefore, programs need to be defined as either related to construction, maintenance, driver and vehicle services, and general government support. If it were determined that a function should be moved from the maintenance appropriation, the counties would not gain fiscally unless the functions were transferred without funding.</p> |
| 54 | <p>A7. <u>Some Supervisors at the Central and Engineering District Offices Have Narrow Spans of Control Resulting in Unnecessary Layers of Management</u></p> <p><u>Recommendation</u>- PennDOT should review the charges made by the central office and engineering districts to the counties to ensure the charges clearly and reasonably relate to highway maintenance functions. PennDOT should report the results of this review to the Transportation Committees of the Senate and the House of Representatives.</p> | Agree | <p>We are in general agreement that a Department wide review may be in order to identify and question the necessity for many of the one on one and one on two reporting relationships. Many of these situations can be directly attributed to a reduction in workforce in juxtaposition to technological advances. We do not expect whatever savings if any, to be anywhere near the estimate.</p> |
| 54 | <p>A7. <u>Some Supervisors at the Central and Engineering District Offices Have Narrow Spans of Control Resulting in Unnecessary Layers of Management</u></p> <p><u>Conclusion</u> - A review of three engineering districts found 18 instances of 1:1 reporting relationships and 11 instances of 1:2 reporting relationships. Within Highway Administration's five bureaus, 29 instances of 1:1 reporting relationships and 21 of 1:2 reporting relationships were found. Such narrow spans of control can create inefficiencies and redundant layers of management. Estimated savings could amount to \$5 million annually if all of Highway Administration's 1:1 reporting relationships were eliminated.</p> | Agree | <p>We are in general agreement that a Department wide review may be in order to identify and question the necessity for many of the one on one and one on two reporting relationships. Many of these situations can be directly attributed to a reduction in workforce in juxtaposition to technological advances. We do not expect whatever savings if any, to be anywhere near the estimate.</p> |
| 54 | <p>A7. <u>Some Supervisors at the Central and Engineering District Offices Have Narrow Spans of Control Resulting in Unnecessary Layers of Management</u></p> <p><u>Recommendation</u> - PennDOT should review its organizational structure with the goal of eliminating all 1:1 and 1:2 reporting relationships.</p> | Agree | <p>We are in general agreement that a Department wide review may be in order to identify and question the necessity for many of the one on one and one on two reporting relationships. Many of these situations can be directly attributed to a reduction in workforce in juxtaposition to technological advances. We do not expect whatever savings if any, to be anywhere near the estimate.</p> |

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----------|--------------------------|--------------------|----------------------|
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| | | | |
|----|---|-------|--|
| 58 | <p><u>A8. PennDOT Expended Over \$162 Million in Winter Services and Pothole Repairs in 1996; Winter Related Damages Are Estimated at an Additional \$145 Million</u></p> | Agree | |
|----|---|-------|--|

Conclusion - Snow removal and other winter services cost over \$142 million during the winter of 1995-96. Winter and spring pothole repairs, through April, cost an additional \$24 million. The snow, ice floes, and flooding in the winter of 1995-96 caused an additional estimated \$145 million in damages to PennDOT roads and bridges. PennDOT responded to the emergency conditions by using new technology; by reemploying work crews; and by instituting emergency contracting procedures. PennDOT has imposed a hiring freeze and delayed spring maintenance to redirect resources to meet the needs created by this winter's storms and floods.

| | | | |
|----|---|----------|---|
| 62 | <p><u>A9. Much of PennDOT's Major Equipment Has Exceeded Its Expected Useful Life</u></p> | Disagree | <p>Borrowing equipment is generally done on a short term basis; in rare instances there may be long term borrowing. A tracking procedure to account for transfers of this type of operational funding does not appear to be cost effective. However, we will investigate the possibility of a tracking procedure.</p> |
|----|---|----------|---|

Conclusion - Several county managers have cited the lack of equipment or outdated equipment as inhibiting the ability to perform work in a timely manner. On an average, 25 percent of PennDOT's major categories of equipment (e.g., dump trucks, loaders, backhoes, excavators and graders) have exceeded their expected life. To better address its equipment needs, PennDOT increased its equipment budget from \$18 million in FY 1994-95 to \$24 million in FY 1995-96.

Recommendation - When a county borrows a piece of equipment from another county for a significant portion of that piece of equipment's useful life (e.g., 25 percent), the borrowing county should reimburse the source county for the depreciation incurred.

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG | NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----|------|--|--|--|
| 67 | A10. | <p><u>Many Maintenance District Facilities Need to Be Renovated or Replaced</u></p> <p><u>Conclusion</u> - Many PennDOT maintenance facilities are in need of major repairs and renovations. Renovations are probably not economically feasible or desirable at some facilities; these facilities should be consolidated or replaced, PennDOT has established a prioritized listing for renovations and improvements, and options to correct facility deficiencies are to be identified by June 1996.</p> <p><u>Recommendation</u> - PennDOT should make its recommendations and cost estimates for correcting the most serious maintenance district facility deficiencies available to the House and Senate Transportation and Appropriations Committees.</p> | <p>Agree with wording modified as follows:</p> | <p>We suggest the following wording:</p> <p><u>Conclusion</u> - Many PennDOT maintenance facilities are in need of major repairs and renovations. Renovations are probably not economically feasible or desirable at some facilities; these facilities should be consolidated or replaced. PennDOT has established a prioritized listing for replacement with options to be identified by June 1996.</p> <p><u>Recommendation</u> - PennDOT should make its recommendations and cost estimates or replacement of maintenance district facilities available to the House and Senate Transportation and Appropriations Committees.</p> |

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG NO FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|--------------------------------------|--------------------|----------------------|
|--------------------------------------|--------------------|----------------------|

70 All. Efforts to Address Work Zone Safety and Motorist Inconvenience Could Be Improved, but Liability Concerns Limit the Steps That Can Be Taken

Conclusion - Between 1991 and 1995, accidents in work zones increased 82 percent. Largely as a result of the fatalities and injuries in highway construction zones in 1993, PennDOT has placed increased attention on work zone safety initiatives such as attempting to reduce lane closings and sign clutter. Due to liability concerns, however, speed reduction and construction warning signs sometimes remain in place even though construction is no longer in process. Such signs cause motorist inconvenience and can cause motorists to question the validity of other construction warning signs.

Recommendation - PennDOT should continue its efforts to include additional work zone safety and motorist inconvenience factors in its quality assurance reviews. As part of this effort, PennDOT should review the potential liability if it began enforcing the policy that inappropriate signs be removed or covered, as recommended by its consultant in 1995. In particular, 40 mph speed limit signs and Roadwork Ahead "X" Miles signs should be present to maintain safety while maximizing driver respect. PennDOT should also work with the State Police to ensure that valid work zone speed limit restrictions are enforced.

Agree

- Page 100, paragraph 2, a Traffic Control Plan (TCP) is developed only for construction projects. *
- Page 101, paragraph 1, the issue regarding whether signs within the work zones are necessary and valid is included in the new quality assurance checklists as question number 27. **
- Page 101, last paragraph, the special work zone safety task force should be identified as the special work zone safety steering committee. *
- The total number of work zone accidents is not a good measure since it does not take into account exposure. For example during this same period, the number of fatalities per \$100 million of construction on freeways decreased. During the years 1991 and 1992, the fatality rates were 2.30 and 2.24 respectively. In 1993, it rose to 6.71, then fell to 2.16 in 1994. In 1995, the rate further decreased to 1.06 which is less than half the pre-1993 rate. This is a better representation on how PennDOT is performing.
- PennDOT will add a "motorist inconvenience" measure to our quality assurance reviews. This issue will be referred to the Work Zone Traffic Control Task force to develop measurement criteria.
- The liability of removing construction signs and work zone speed limit signs during temporary shutdowns will be referred to the Risk Management Steering Committee.
- It is very difficult to enforce work zone speed limits because of police manpower constraints, volume of traffic, and lack of good locations to set up radar and write citations. PennDOT and the PA State Police have executed a Memorandum of Understanding whereby the PA State Police will provide an enhanced police presence on projects where backups are expected and where workers are not protected by a positive barrier. The 1995 fatality rate of 1.06 fatalities per \$100 million of construction on freeways is a strong indication of the effectiveness of the measures, including speed enforcement that have been taken since 1993.

*LB&FC Note: This change was made in the final version of the report.

**LB&FC Note: Item 27 on the new quality assurance checklist asks "conflicting signs removed or property covered"; it does not address whether the signs are necessary and valid.

AUDIT AREA: HIGHWAY ADMINISTRATION

PG

NO FINDINGS/RECOMMENDATIONS

AGREE/

DISAGREE COMMENTS/SUGGESTIONS

76

A12.

Truck Weight Waiver Fees Do Not Appear to Cover the Cost of the Damage Caused by Overweight Trucks

Agree

Any increase is likely to be met with opposition, but this is a matter for the Legislature. Assessment of fines is a matter for the courts. We will provide information and assistance.

Conclusion - Truckers must apply for a permit to travel on Pennsylvania's highways if their trucks are in excess of the 80,000 pound weight limit. This as a component of the federal government's certification of Pennsylvania's truck weight enforcement program and is a condition of receipt of federal highway funds. Waiver permits cost \$15 plus 3¢ per ton mile traveled and are intended, in part, to defray the additional costs associated with road maintenance from overweight trucks. In FY 1994-95 the fees generated \$6 million from 290,000 permits, and an additional \$4 million in overweight ton-mile fees. PennDOT, however, does not maintain information on the damage to Pennsylvania's highways resulting from overweight trucks, and the 3¢ per ton-mile fee has remained the same since 1975. Additionally, only about 25 percent of the fines assessed against truckers for noncompliance with overweight requirements are actually collected.

Recommendation - PennDOT should develop and provide to the House and Senate Transportation Committees an estimate of the permit fee that would be required to cover the additional damage caused to roadways by overweight trucks. The General Assembly should consider increasing the truck weight waiver fee to cover all or at least a significant portion of the damage caused by overweight trucks. The General Assembly should also consider authorizing PennDOT to adjust such fees in regulation, based on cost factors and criteria designated in statute. PennDOT should convene a working group comprised of representatives of the Administrative Office of PA Courts, The PA Attorney General's Office, and the Pennsylvania District Magistrates Association to address what appears to be a routine practice of reducing the fines imposed on truckers. As part of this effort, this group should explore the feasibility of imposing the fines on the companies that load the overweight trucks and trailers rather than on the truckers who haul these loads.

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----------|--------------------------|--------------------|----------------------|
|----------|--------------------------|--------------------|----------------------|

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|----|--|--|--|
| 84 | A13. <u>PennDOT Will Spend About \$16 Million to Comply With Federal Metric System Conversion Requirements</u> | | |
|----|--|--|--|

Conclusion - PennDOT anticipates that it will expend \$16 million by 1997 to comply with federally mandated metric conversion requirements. The Department expects to begin using metric measurements throughout its operations by July 1997. The federal requirement that states convert road signs to metric units, however, has been dropped.

Agree

Our cost-benefit analysis concluded that our \$16 million metric conversion expenditure will be offset by approximately \$5 million per year in future project cost savings. These savings are anticipated from a decrease in work-hours through the elimination of conversion calculations, an increase in the accuracy and efficiency of design programs, and contract processing time savings. The summary/conclusion statements should be revised as follows: "PennDOT anticipates that it will expend \$16 million by 1999", (not 1997); and - "The federal requirement that states convert road signs to metric units, however, has been delayed to the year 2000" - (not dropped). *

*LB&FC Note: The National Highway Systems Act, Public Law 104-59 of November 28, 1995, clearly states that (a) the placement and modification of signs is no longer required and that (b) other actions are delayed until September 30, 2000.

AUDIT AREA: HIGHWAY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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86 B1. Although Traffic Fatality Rates Have Been Decreasing, Accident Rates Among Young Drivers Remain High

Conclusion - Paralleling a national trend, traffic fatality rates in Pennsylvania have been decreasing in recent years. Pennsylvania has ranked at or near the middle among the states over the last five years in fatality rates. Safer cars and initiatives taken by PennDOT and others, such as the National Highway Traffic Safety Administration and the State Police, have contributed to the reductions. However, accident rates for teenage drivers remain high, more than four times the rate for middle-aged drivers. National data and early evidence in Pennsylvania is inconclusive as to whether the higher speeds now allowed on limited access rural highways will result in higher fatality rates.

Agree

Passing a .02 BAC limit for underage DUI is an Administration priority; legislation is currently under active consideration. Strategies for reducing accidents among younger drivers are being pursued through the Comprehensive programs. Additionally, programs to reduce the purchase of alcoholic beverages are under development in conjunction with the PA Liquor Control Board. Dependent on available funds, a new anti-DUI Public Information and Education Campaign will be developed within the next two years.

Recommendation - To avoid losing federal grants for sobriety checkpoints and future federal highway funding, the General Assembly should consider legislation to establish a .02 percent BAC limit for drivers under 21 years of age. PennDOT should prioritize the various strategies for reducing accidents among younger drivers and truckers and report to the General Assembly on those requiring statutory change. It should develop additional public information and events accordingly.

AUDIT AREA: SAFETY ADMINISTRATION

| PG | NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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| 94 | B2. | <u>Decentralization and Privatization of Licensing, Registration, and Driver Exam Services Has Improved Customer Convenience, but Some Issues Remain</u> | Agree | |
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Page 97, Paragraph 3 states " By summer 1996, PennDOT plans to expand the services offered at four driver license centers (Erie, Huntingdon Valley, Greensburg, and York)". Huntingdon Valley already provides one-stop shopping for new residents. New residents can have their out-of-state license replaced with a Pennsylvania photo license and they can receive a permanent Pennsylvania registration plate, sticker and card. With the implementation of 39 on-line messenger sites throughout the state, the Department will re-evaluate the need for additional services at the remaining sites.

Page 100, Paragraph 3 - As of June 17, for a non-CDL test, the shortest wait time was one work day and longest wait time was 10 work days; for a CDL test, the shortest wait time was one work day and the longest wait time was eight work days. Furthermore, the Department has streamlined the CDL skills test, which brought the wait times down from four to six weeks previously, to the current two weeks.

Page 104, Paragraph 2 states " PennDOT found that, although the service worked technically, it provided little value to the dealer." As the pilot program was structured, this is true. The pilot program has been restructured by the Department since the initial evaluation to guarantee the timely submission of paperwork from participating dealerships. Funds submitted to the Department would be guaranteed by the third party, eliminating bad checks. Dealerships would be able to move their inventory quicker due to on-line processing, and would help reduce dealer buy backs caused by untimely receipt of vehicle information. One of the main service improvements under the enhanced plan allows the registration process to be completed at the dealership. The permanent registration card is printed and the permanent license plate, with the appropriated permanent sticker is placed on the customer's vehicle. This process eliminates the current post-registration mailing of these documents to the customer by PennDOT, and any further interaction with the customer.

Page 104, Paragraph 3 - GS5, the third party host has provided the following costs based upon their operations in other states: \$1,000 for the initial software (\$500 for each year thereafter; \$5 to \$10 fee for each transaction processed; and \$1,500 to \$2,500 to purchase PC hardware from them if the dealership does not have its own PC equipment.

Page 105, Paragraph 2 - As of June 17th, 26 schools were participating in this program. The program has been very well received and will be expanded to schools that use private driving education service.

Further Comments: The Department agrees with the recommendation to re-exam drive times to its service centers. The current distribution of centers may be too consolidated to provide convenient service to all of our customers. This will be evaluated on a site by site basis. The Pennmobile will be also be used for special events such as County Fairs and for visits to office complexes. Legislative inquiry is still being planned, with the assistance of the Legislature.

AUDIT AREA: SAFETY ADMINISTRATION

PG _____

NO _____ FINDINGS/RECOMMENDATIONS _____ AGREE/
DISAGREE _____ COMMENTS/SUGGESTIONS _____

94 82. (Continued)

Conclusion - As required by Act 1992-166, PennDOT has been in the process of decentralizing and privatizing many of its driver licensing, registration, titling, and driver examination services. Initiatives implemented or being examined include "one-stop shopping" for driver licensing services, a PennMobile to provide services in rural areas, expanded messenger/legislative inquiry services, end-of-course skills testing at driver education programs, and the ability to renew driver licenses and vehicle registrations over the telephone.

As part of its decentralization effort, PennDOT realigned several of its photo license and driver examination centers, causing temporary disruptions. It was also noted that driver exam wait times may exceed PennDOT's two-week goal during the summer months and that travel times to driver licensing centers can be 45 minutes or more in some rural areas.

Recommendation - PennDOT should develop goals for acceptable maximum driving times and/or mileage distances to its various driver license centers. Areas outside these zones should be targeted for PennMobile services.

AUDIT AREA: SAFETY ADMINISTRATION

PG

NO FINDINGS/RECOMMENDATIONS

AGREE/
DISAGREE

COMMENTS/SUGGESTIONS

106 83.

PennDOT Plans to Privatize Its Telephone Information Center to Improve Operations

Agree

PennDOT agrees that the vendor should be required to report on the problems that are generating calls, along with recommendations for improvements. In fact, PennDOT has stated in the RFP used to acquire this service that "During the period of the contract, the contractor shall collect accurate data from calls or complaints and provide the data to PennDOT for better understanding of the customer's needs." The RFP will continue in force as part of the contract with the contractor. Currently the Telephone Information Center (TIC) employees prepare a "crises report". When the same question is being asked by several customers, they will alert their supervisor that a problem may exist e.g. if several people call saying they have not received their June license renewal application, the supervisor will check to make sure there was not a system problem. Additionally, to capture information about calls of special interest, such as recent procedural changes affecting our customers, TIC operators are instructed to keep counts of these calls.

Page 106. Paragraph 3 states "The TIC operates from 7:00 a.m. to 9:00 p.m. with 48 full-time and 50 part-time customer staff." As of June 12 there were 47 full-time and 36 part-time customer staff. To our knowledge, the numbers in the report were accurate at the time the information was gathered. Upon adding the part-time employee and increasing the work week to 40 hours, the average time in queue dropped from 1.6 minutes to 1.3 minutes, an 18% decrease. An average of 30,000 customers are helped by these part-time employees each month.

Page 106. Paragraph 4 states "The Department estimates that each caller tries about 75 times before being able to speak to an operator." The Department has received reports from our AT&T Representative indicating that a caller may try up to 75 times.*

Further comments: The Department is currently conducting contract negotiation with the vendor and the final annual dollar costs have not been determined.

Conclusion - PennDOT's Telephone Information Center (TIC) has experienced busyouts for its 800 customer service lines ranging from 6.6 million to 7.3 million times annually. Customer difficulty in reaching an operator or the Voice Processing System (VPS) generated many complaints, prompting PennDOT to contract for such services. As of May 1996, PennDOT had chosen a contractor and hoped to have a contract signed by mid-June 1996. The contractor proposes to reduce the problem of busyouts through new technologies, extending operator hours, and expanding the number of 800 lines.

Recommendation- PennDOT should attempt to modify its draft contract with its proposed telephone center vendor to ensure that it receives statistical reports on the types of problems that are generating calls and recommendations from those receiving the calls on how these problems could be alleviated.

*LB&FC Note: These changes were made to the final version of the report.

AUDIT AREA: SAFETY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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| 109 B4. | <p><u>Vehicle Registration and Driver's License Fees Have Not Been Increased Since 1975</u></p> <p><u>Conclusion</u> - PennDOT's driver's license and vehicle registration fees have not been increased since 1975. At \$24 every four years, Pennsylvania's driver's license fee is already among the nation's highest. The cost to register a passenger vehicle in Pennsylvania, however, is among the nation's lowest, and the cost to register trucks is also low to average among the states. If the annual registration fee for passenger vehicles and light trucks were raised to the inflation-adjusted rate of \$66, \$107 (up to 5,000 lbs.), and \$149 (5001 to 7,000 lbs.), an additional \$372 million would be generated for the Motor License Fund.</p> | Agree | As part of the continuing discussions regarding increasing revenues for the Motor License Fund, fee increases and their impacts on personnel levels and equipment needs should be reviewed. |
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Recommendation - The General Assembly should consider raising some or all annual vehicle registration fees as a way to generate additional revenue for the Motor License Fund. Considerations should also be given to varying these fees depending on the value of the vehicle being registered.

AUDIT AREA: HIGHWAY ADMINISTRATION

PG

NO FINDINGS/RECOMMENDATIONS

AGREE/
DISAGREE COMMENTS/SUGGESTIONS

113 85.

PA's Truck Fuel Tax and Registration Programs Have Improved, but Additional Attention is Needed on the Truck Safety (MCSAP) Enforcement Program

Agree Cross training personnel will provide efficiencies. We will develop a written policy for MCSAP inspectors about CVSA issues and work with the Department of Revenue.

Conclusion - Truck safety inspections are conducted by PennDOT, the State Police, and the Public Utility Commission (PUC). In part, due to Federal cutbacks, the number of such inspections fell from 55,926 in FY 1990-91 to 38,148 in FY 1993-94 before returning to 50,441 in FY 1994-95. PennDOT has also agreed to participate in an interstate Commercial Vehicle Safety Alliance (CVSA) program to coordinate safety inspections between states, but it seems that Pennsylvania inspectors have little confidence in the program and often do not issue CVSA decals or exempt trucks with CVSA decals from repeat inspections. Finally, two new truck registration programs (IFTA and IRP) appear to have improved administrative efficiency in collecting motor carrier fuel taxes and registration fees.

Recommendation - PennDOT should report the total number of MCSAP inspections undertaken by the Department, the Pennsylvania State Police, and the PUC as one of its performance measures in the Governor's Executive Budget. PennDOT, in conjunction with the Pennsylvania State Police and the PUC, should develop a written policy to be used by all MCSAP inspectors to determine when to issue a CVSA sticker and under what circumstances vehicles with valid CVSA stickers should be reinspected. If this policy differs substantially from the guidelines of the CVSA program, PennDOT should withdraw from its agreement to participate in the CVSA program. The Department of Revenue should report to the House and Senate Transportation Committees on the status of the first-year implementation of the IFTA program, including stickers issued, revenues generated, and first-round audit

AUDIT AREA: SAFETY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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| 123 | <p>B6. Uninsured Vehicles Remain a Problem, Particularly in the Philadelphia Area</p> | Agree | |
|-----|--|-------|--|

Conclusion - The LB&F's 1994 performance audit report on auto insurance in southeastern Pennsylvania estimated that up to one-third of the motor vehicles registered in Philadelphia were uninsured. Recent estimates show that the number of registered, uninsured vehicles in Philadelphia may have declined slightly since 1994. These figures do not, however, include unregistered vehicles that may be operating without insurance or that are fraudulently registered at an address outside the city.

In November 1995, PennDOT stopped auditing vehicle registration renewals for compliance with the Financial Responsibility Law (FRL). PennDOT is now focusing on potentially fraudulent vehicle titles, particularly those submitted by messenger services and tag agents, and on working with the Office of Attorney General and the Philadelphia District Attorney to identify insurance fraud. PennDOT has made progress in implementing a new computer system to identify uninsured vehicles but this system is not as effective as it could be because insurance companies are not required to provide information on new policies. Other proposals to improve compliance with the FRL include amending current statutes to allow private agents to collect the tags on uninsured vehicle, increasing fines, and granting state and local police the authority to impound uninsured vehicles.

- A. Require insurers to report information on new policies written. The Department agrees with this recommendation and a call for companies to report new policy information. This would enable the Department to detect uninsured motorists more accurately. A high degree of accuracy must be achieved prior to the implementation of more severe sanctions.
- B. Authorize PennDOT to contract with private parties to recover the tags of uninsured vehicles. The Department agrees with this recommendation. Funding to support this effort must be identified. A recovery fee structure could be instituted, paid by the uninsured motorist, to offset program costs. This recovery fee could be attached to the restoration fee. Florida's tag recovery program should be reviewed by PennDOT. Based upon that assessment, a pilot could be developed by PennDOT.

AUDIT AREA: SAFETY ADMINISTRATION

PG

NO FINDINGS/RECOMMENDATIONS

AGREE/
DISAGREE

COMMENTS/SUGGESTIONS

123 B6. (Continued)

C. Provide state and local police with the authority to impound vehicles whose registration has been suspended for lack of insurance. The Department agrees with this recommendation in concept and feels it would be a powerful deterrent to combat vehicles being operated without insurance. Based on the current numbers of vehicles which are suspended, this recommendation would require considerable logistical support. As with costs associated for the tag confiscation recommendation, costs for implementation of the impounding of vehicles with suspended registrations due to lack of insurance should be offset by violators. Because of the high percent of uninsured vehicles in Philadelphia, this recommendation should be initiated as a local countermeasure in conjunction with the Philadelphia District Attorney's insurance program. Any program calling for the impounding of vehicles, either state or local, must be supported with accurate data.

D. Increase the fine for noncompliance. The Department agrees with this recommendation. In addition, the fee to restore a registration suspended for lack of insurance should be increased. The fines should be increased from \$300 to the average cost of a yearly insurance premium and the existing restoration should be increased from \$50 to provide a further monetary deterrent.

Page 125, footnote 2 states "If an applicant submits false or fraudulent information, PennDOT can refuse to register the vehicle or can suspend its registration." This refusal can also take place when the information is incomplete. *

Page 128, Paragraph 1 states "Under the new system suspension letters are generated when: (1) the insurance company name or other insurance related information is not complete; (2) multiple cancellation notices are received for the same motorist; and, (3) the vehicle identification number does not match the vehicle's reported model and make." As a point of clarification, suspension letters are not generated immediately, but are sent when the above listed problems are not satisfactorily resolved by the motorist:*

*LB&FC Note: These changes were made to the final version of the report.

Recommendation - The General Assembly should consider- A)

Amending the Motor Vehicle FRL to require insurers to report to PennDOT on a timely basis information on new policies written so that such information can be matched with cancellation information received by the Department. Such an amendment should also give PennDOT the authority and means to enforce this requirement; B) Authorizing PennDOT to contract with private parties to recover registration tags on vehicles whose registration has been suspended for not having insurance; C) Providing the State Police and local authorities with statutory authority to impound vehicles whose registration has been suspended for lack of insurance; and, D) Increasing the fine for noncompliance to the Motor Vehicle FRL to a point where it provides a meaningful economic deterrent to driving without insurance.

AUDIT AREA: SAFETY ADMINISTRATION

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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| 132 | 87. <u>PennDOT Has Submitted Its Revised Plan to Comply With Federal Clean Air Standards</u> | | |
|-----|--|--|--|

Agree

The State Implementation Plan (SIP) has been submitted to EPA. PennDOT is working vigorously on program implementation. An I/M working group, comprised of state repair and maintenance organizations and motorist associations, was formed to involve them in the management plan and development of regulations. PennDOT has also been working with manufacturers of diagnostic repair equipment as part of a coalition of states to develop a cost effective equipment specification with the aim of reducing equipment costs. In addition to Pennsylvania, the states are Virginia, New Jersey, Texas and Georgia. Two ozone stakeholder groups, comprised of representatives from various groups affected by clean air issues, are meeting regularly to ensure their concerns and issues are addressed and that the enhanced I/M program complements their overall strategy.

A pilot/demonstration program is scheduled for implementation in the fall of 1996. Equipment will be donated by the manufacturers and will be installed in the Philadelphia and Pittsburgh areas for the purpose of educating testing and repair industry personnel and customers on the enhanced program.

Conclusion - PennDOT has only recently developed a State

Implementation Plan which the General Assembly has accepted. This plan was submitted to the EPA in March 1996, and federal conditional interim approval is expected by late summer 1996. According to the plan's calculations, Pennsylvania should meet EPA revised standards using a decentralized emissions inspection plan. Under the prior centralized plan, Pennsylvania had hired a contractor, Envirotest, to implement a biannual test-only plan. The Commonwealth reached a settlement with Envirotest to reimburse approximately \$145 million plus interest to the contractor to end the agreement.

AUDIT AREA: LOCAL AND AREA

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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| 135 | C1. <u>The Decline in Public Transportation Ridership is Likely to Continue</u> | Generally Agree | It would be appropriate to acknowledge several key factors that have contributed to the decline in ridership such as: |
| | <p><u>Conclusion</u> - Public transit ridership in Pennsylvania dropped from 435 million passengers in FY 1990-91 to 399 million in FY 1994-95, an 8 percent decline. Combined federal and state grants to mass transit in Pennsylvania grew from \$510 million to \$725 million during this same time period, an increase of 42 percent. Federal funding cuts, however, are now occurring. Public transit operators in Pennsylvania are attempting to adjust to these cuts by cutting services, raising fares, or a combination of the two. This may lead to further ridership declines.</p> | | <ul style="list-style-type: none"> - Land development policies and practices which are very difficult to serve cost effectively with public transportation; - Investment and improvement in levels of service in competing modes, particularly auto travel; - Ready availability and relatively low cost of gasoline throughout the period studied; and, - Ample supply of parking and employer subsidized parking, particularly in areas which might otherwise represent attractive markets for public transit providers. |
| 140 | C2. <u>The Road Turnback Program Has Stalled Due Primarily to Low Funding for Local Maintenance Costs</u> | Agree | At current funding levels the figure on page 142, second paragraph should be 300 or 400 miles by the year 2000, not the cited "900 miles by the year 2000". *Concerning the recommendation, we support the need to increase the annual maintenance grant and also increase the restoration funds so that the number of miles of roadway returned to local ownership does not decrease but rather increases annually. But we cannot do so at the expense of our other activities. This is a prime candidate for the dedication of additional user fee revenues. |
| | <p><u>Conclusion</u> - PennDOT is responsible for many secondary roads that in most states would be owned and maintained by local governments. Efforts to transfer these 12,000 miles of roads to local governments have stalled in part because the annual \$2,500 per linear mile grant municipalities receive when they take a road back falls far short of actual annual maintenance costs.</p> <p>Yearly revenues to the turnback program are currently \$15.5 million. At this rate, annual maintenance payments alone will consume all of the funds once the mileage turned back, now at 3,760, reaches 6,213 linear miles. This will occur sooner if the \$2,500 annual maintenance grant is increased.</p> | | <p>* LB&FC Note: This change was made to the final version of the report.</p> |
| | <p><u>Recommendation</u> - The General Assembly should consider increasing the amount of the Oil Franchise Tax dedicated to the State Highway Transfer Restoration Restricted Account to allow an increase in the annual maintenance grant for the new roads turned back to local governments. Once a new annual maintenance grant is established, PennDOT should reconsider the roads it has targeted for local turnback to determine whether it could maintain the roads for less than the cost of the new maintenance grant. Such roads should be removed from turnback consideration.</p> | | |

AUDIT AREA: AVIATION AND RAIL FREIGHT

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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| 144 | <p><u>D1. The Rail Freight Assistance Program is Being Better Integrated With Regional Economic Development Strategies</u></p> <p>Conclusion - PennDOT administers a statutory grant program intended to preserve essential rail freight service and stimulate economic development. In 1990, PennDOT did not use a comprehensive rail freight plan or a broad based set of application criteria for awarding grants. In 1993 PennDOT and Penn State University collaborated to develop priorities and criteria for grant funding, including whether projects sustain economic development, increase rail transportation efficiencies, or improve safety.</p> | Agree | <p>Project evaluation criteria have been developed by the new Comprehensive Rail Freight Study. This criteria was included in the 1996-97 RFAP application. The criteria assigns points to the projects based upon job creation, job retention, trucks removed from highways and other Departmental priorities.</p> |
| 148 | <p><u>D2. Capital City Airport Operates at a Deficit but Provides an Important Service to HIA</u></p> <p>Conclusion - The Commonwealth owns three airports: Harrisburg International Airport (HIA), Capital City Airport, and Grand Canyon Airport. HIA operates at a profit, Grand Canyon generally operates at a small loss, and Capital City loses about \$500,000 annually. However, unlike the arrangements between the Pittsburgh airport and its reliever, HIA does not provide a subsidy to offset the costs of Capital City. Capital City needs these funds to conduct extensive repairs and renovations.</p> | Agree | <p>Page 150, first paragraph, third line under Capital City Airport- PennDOT did not dismiss Johnson Controls, Johnson Controls notified PennDOT that they were terminating their agreement. *</p> |

*LB&FC Note: This change was made to the final version of the report.

Recommendation - If PennDOT has not been able to divest itself of the Capital City Airport by June 30, 1998, the date the current HIA agreement is due to expire, PennDOT, in any new agreement, should seek terms authorizing the use of a portion of HIA landing fee revenues (or other compensation) to offset expenditures at Capital City Airport, HIA's designated reliever airport.

AUDIT AREA: AVIATION AND RAIL FREIGHT

PG

NO FINDINGS/RECOMMENDATIONS

AGREE/
DISAGREE COMMENTS/SUGGESTIONS

153 D3.

The Department Could Benefit from a Statutorily Established Aviation Advisory Committee

Agree

PennDOT has taken steps to bring this recommendation into reality and has begun the process of drafting needed legislation to accomplish this task.

Conclusion - The Aviation Code does not provide for an advisory body to assist and advise PennDOT. This is in contrast with PennDOT's rail freight assistance program which has an active and productive Rail Freight Advisory Committee. The Bureau of Aviation has been using the Aviation Council of Pennsylvania, an informal group, as a de facto advisory committee. Statutory authority for such a group would add legitimacy and continuity in establishing a partnership with the aviation industry.

Recommendation - The General Assembly should consider amending the Aviation Code to provide for an aviation advisory body to PennDOT. The aviation advisory body should include aviation experts; representatives of airlines, airport owners, and managers; representatives of local and regional planning groups; legislators; and one or more members of the general public.

AUDIT AREA: ADMINISTRATION AND PLANNING

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| 156 | <p>E1. <u>MLF Revenue Growth Is Projected to Be Flat. Possible Sources of New Revenue Include a Gas Tax Increase, Bonds, Higher Vehicle Registration Fees, and Increased Public/Private Partnerships</u></p> <p><u>Conclusion - Motor License Fund (MLF) revenues come primarily from the state liquid fuels tax, driver's license and registration fees, and federal funds. Little revenue growth is projected from any of these sources. Therefore, if Pennsylvania is to do much more than maintain its existing transportation infrastructure, new sources of revenue will be needed. Proposals include increasing the gas tax; increasing vehicle registration, overweight truck permit, and other fees; issuing bonds; tolling existing interstates and/or constructing new private toll roads; and promoting public/private partnerships.</u></p> | <p>Agree with reservations</p> | <p>The Ridge Administration does not favor borrowing for roads. Debt payments reduce funds available to maintain existing roads. PennDOT has provided data indicating that Motor License Fund and maintenance buying power will continue to decline despite the drop in debt service.</p> |
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171 E2. The Commonwealth's Purchasing Procedures, Which PennDOT Must Follow, Result in Delays and Added Costs but Improvements Are Being Made

Conclusion - PennDOT's ability to purchase materials and routine services is hampered by complex purchasing procedures that require multiple layers of review and approval, resulting in delays and added costs. While these procedures apply to all executive branch agencies, PennDOT is one of the most heavily affected departments because of its large volume of purchases. PennDOT, the Department of General Services (DGS), and the Office of the Budget are considering, and in some cases have initiated, reforms to make the procurement process more efficient.

Recommendation - 1) PennDOT should continue efforts to reduce the turnaround time for processing material and service purchases by reducing the number of signatures required where appropriate, by developing on-line communication with vendors, and by electronically sending bid notices to the *Pennsylvania Bulletin*. 2) PennDOT and DGS should establish reasonable procedures allowing PennDOT field offices to use Direct Purchase Authorizations for items that are on a DGS statewide contract or that must currently be obtained through PennDOT of DGS central warehouses (e.g., the item must be of similar or better quality and cost at least ten percent less than what the item could be purchased for through normal state channels). Such procedures should, however, be viewed within the context of all state government so that savings realized by PennDOT do not result in significant additional cost to other state agencies. 3) DGS and the Office of the Budget, together with large agencies such as PennDOT should work toward implementing the recommendations of the INPACTT Commission to streamline and simplify Commonwealth procedures for purchasing goods and services.

Agree

Page 172, paragraph 1, "Although office supplies can now be purchased, several of the field officials we interviewed said that the process is so ponderous that it discourages their participation." - The procedure for purchasing office supplies has not been changed. Items available from DGS's warehouse must be purchased from them. *

Page 173, footnote 1, "Other procedures apply for four types of procurements: motorized equipment purchased by the Equipment Division..." - Motorized equipment purchased by the Equipment Division should not be included as an exception. *

Page 173, paragraph 1, "DPA's cannot be used to purchase items that are available from central warehouses, items on DGS contract, vehicle repair parts if they are needed immediately." - Vehicle repair parts if they are needed immediately, EDP equipment or software, and telecommunications equipment may be purchased via DPA if items are not available through DGS statewide contract, DGS warehouse or one of PennDOT's warehouses. *DPA purchases must be reviewed and approved by the county maintenance district, the engineering district and the Bureau of Office Services Materials and Services Management Division(MSMD). - This is not accurate. DPA's for field organizations may be approved by authorized engineering and maintenance district personnel. *

Page 173, paragraph 2, "Approval is required of the county maintenance district: the engineering district; and within, POS, the transportation purchasing officer and the MSMD manager. Those items that have been pre-approved by the agency and the Comptroller do not need central office approval." - This is not accurate. Central office approval is required by the BOS transportation purchasing officer and the Comptroller. Also, no pre-approved list exists for commodities. The local bid/central award applies to commodities only, not services. *

Page 173, paragraph 4, "This applies to commodity purchases of more than \$10,000 and for sole source commodity purchases over \$300." - This is not accurate. This applies to commodity purchases of more than \$10,000 and or sole source commodity purchases over \$1,500 (not \$300). *

Page 174, paragraph 2, "Manual (paper) contracts under \$1,500 must be reviewed and signed by the initiating engineering district or central office bureau." - Manual orders (not contracts) from statewide commodity contracts under \$1,500 must be reviewed and signed by the initiating engineering or maintenance district or central office bureau. *

Page 174, paragraph 5, "Until January 1996, these commodities required a minimum order quantity of \$50. MORIS and manual orders must have MSMD approval." - Prior to January, the DGS warehouse required a minimum order quantity of \$50. There is no limit from the PennDOT warehouse. MORIS generated orders may be approved locally for field organizations. *

Page 175, last paragraph, "Noncompetitive SPC's and all SPC's over \$25,000 also require the signature of the Deputy Secretary for Administration." - This is not accurate. SPC's between \$25,000 and \$50,000 may be signed the BOS transportation purchasing officer's Manager. SPC's between \$50,000 and \$100,000 by the MSMD Division Chief and SPC's over \$100,000 by the BOS Bureau Director. The Deputy For Administration delegated all signature authority in August 1996. *

Page 176, paragraph 3, "Those greater than \$150 must be authorized by the district engineer (or BOS for bureaus). Comptroller review and approval are needed." - In addition to the Comptroller, the Deputy Secretary for Administration's review and approval is needed. *

Page 176, paragraph 4, fourth bullet, "The Commonwealth is paying higher costs due to proprietary systems applications and architecture." - BOS is not aware of any studies on this issue, although, INPACTT may have conducted one.

Page 177, paragraph 3, "As of March 1996, PennDOT was considering delegating initiating bureau director level signature authority to division Chiefs." BOS is unaware of a specific initiative to delate signature authority from bureau directors to division chiefs; however, BOS is leading a contract review team which is reviewing appropriate signature authority levels.*

*LB&FC Note: These changes were made to the final version of the report.

AUDIT AREA: ADMINISTRATION AND PLANNING

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
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|-----|---|-------|---|
| 179 | <p>E3. PennDOT is Updating its Performance Measures to Place Greater Emphasis on Efficiency and Outcomes</p> | Agree | We have completely revised our old performance measures to better reflect the priorities established in Moving PennDOT Forward. |
|-----|---|-------|---|

Conclusion - Many of PennDOT's current performance measures were developed in the early 1980's and most measure inputs or outputs. (Efficiency and outcome measures are generally recognized as being more useful for decision-making and for accountability.) There is only limited satisfaction within PennDOT with the current measures. PennDOT management recognizes the need to update its performance measurement systems and is developing additional efficiency and outcome measures, including an Organizational Performance Index, a Customer Service Index, and improved highway maintenance evaluation measures.

Recommendation - PennDOT should continue its efforts to improve its performance measurement system by: a) Streamlining the number of measures; b) Focusing on outcomes and efficiency; c) Better integrating the measures with management's decision-making process; d) Continuing its initiative to develop an Organizational Performance Index, a Customer Service Index, and improved measures of the efficiency of county maintenance operations; and e) Creating an understandable and accessible format for the dissemination of the measures to the general public.

AUDIT AREA: ADMINISTRATION AND PLANNING

PG DISAGREE AGREE/
 NO FINDINGS/RECOMMENDATIONS COMMENTS/SUGGESTIONS

183 E4. ISTEA Legislation Established a National Planning Process, but Generally
Congressionally Earmarked Projects Interfere With State and Local Agree
Priorities

Conclusion - Federal legislation passed in 1991, known as ISTEA, gave greater transportation planning and decision-making authority to state and local governments. Pennsylvania's ISTEA planning process provides regional and local planning organizations a full opportunity to initiate and participate in transportation projects affecting their areas. Congress, however, often earmarks federal funds for specific projects. Fully \$1.23 billion of the \$1.62 billion in planned major highway construction funding expected to be available from FY 1997 through FY 2000 is targeted to such earmarked system expansion projects. Rather than turn down such projects and risk losing federal funds, PennDOT and the local planning organizations accept the earmarked projects. As a result, higher priority projects may be left unfunded.

- The finding is worded too strongly, since virtually all earmarked projects had Twelve Year Program status prior to receiving the funding earmark from Congress, and therefore had been assigned priority status. The result then is a skewing of the program towards early implementation of earmarked projects.
- The figures in the summary do not agree with the PennDOT program numbers. The reference should indicate that \$1.32 billion of the \$1.57 billion for the four year period is targeted to earmarked projects. (pg. 183) *
- The discussion about the TIP incorrectly states that the TIP includes rail and aviation projects. (pg. 184) *
- The discussion points out that agreement may not be reached on a TIP but does not acknowledge the reasons why. These generally include differences of opinion on project schedules, reasonably available funding levels, and funding eligibility. (pg. 185)
- Page 185, paragraph 2 " (acting on behalf of the Governor)" should follow " Secretary of Transportation", since that is the authority as specified in ISTEA. (pg. 185)
- Under **Merging ISTEA With the Requirements of Act 1970-120**, the discussion misses the fact that efforts to merge began with the 1994-2006 program. The 1996-2008 program should be referred to as the 1997-2008 program. (pg. 185) *
- The report states that the ultimate decision on projects rests with the General Assembly through passage of the Capital Budget. Actually to use federal funds, several approvals must be in place including MPO approval, the Governor's approval to include the MPO TIP in the Statewide TIP, and Capital Budget authority. (pg. 186)
- Table 33 compares county program shares against county population, but it does not recognize other possible factors such as linear miles, lane miles, vehicle miles of travel, etc. (pg. 188-189)

190 E5. PennDOT Has Complied With the Requirements of Federal ISTEA Agree
Legislation, but the Legislation Has Had Little Impact on Modal with
Funding Decisions reservations

Conclusion - The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) imposed 40 requirements on state transportation departments. PennDOT has complied with virtually all of these requirements. ISTEA also gave states significant flexibility in how they use federal funds to meet their transportation needs. However, Pennsylvania, like most states, has "flexed" few funds available for highways to mass transit or other nontraditional projects.

- The primary cause for this finding is the fact that there is insufficient funding for all transportation modes, making the decision to shift funds from one mode to another extremely difficult. Nevertheless, Pennsylvania has a proven record of flexing highway funds to transit.
- The tone of this finding would indicate that flexing funds to transit is a requirement of ISTEA. In fact, there is insufficient funding for both highways and transit which makes flexible funding decisions very difficult.
- The last sentence of the finding that "Pennsylvania...has "flexed" few funds..." is misleading. Pennsylvania ranks third in the nation in funds flexed through September 30, 1995 with \$253.1 million. A table from the Federal Transit Report Trends in the Use of Flexible Funds for Transit: Fiscal Year 1995 is attached. This figure is different than the \$194.8 million on page 193 and Table 40, because the LB&FC report does not include earmarked funds which are flexed. This is foot noted on Table 40.
- On Table 40, the "Funds eligible for flexing" column is overstated. Not all Bridge and Interstate Maintenance funds can be flexed. Only 40 Percent of Bridge funds through 1995 and 50 percent in 1996 can be transferred to STP and then flexed. Only 20 percent of Interstate Maintenance funds can be flexed, and only if we certify that the Interstate System is being properly maintained. **

*LB&FC Note: These changes were made to the final version of the report.
 **Footnote added to Table 40.

FEDERAL TRANSIT ADMINISTRATION

TABLE 5

FY 1992 - FY 1995 FLEXIBLE FUND TRANSFERS TO FTA BY STATE

| STATE | FY 1992 | FY 1993 | FY 1994 | FY 1995 | CUMULATIVE |
|----------------|----------------------|----------------------|----------------------|----------------------|------------------------|
| ALABAMA | \$501,478 | \$4,327,000 | \$1,168,258 | \$120,000 | \$6,117,734 |
| ALASKA | 248,388 | 1,966,982 | 2,797,438 | 4,134,748 | 9,147,554 |
| ARKANSAS | 6,300,000 | 7,836,282 | 8,031,531 | 8,836,750 | 29,004,543 |
| ARIZONA | 15,671,800 | 98,017,128 | 181,793,581 | 136,036,418 | 409,518,905 |
| CALIFORNIA | 202,000 | 98,000 | 988,000 | 1,810,000 | 2,898,000 |
| COLORADO | 7,820,390 | 10,282,400 | 10,282,400 | 900,000 | 37,024,812 |
| CONNECTICUT | 4,600,000 | 2,884,860 | 17,421,000 | 28,748,000 | 51,653,860 |
| FLORIDA | 394,958 | 5,058,808 | 2,712,150 | 8,800,000 | 14,967,958 |
| GEORGIA | 14,800,000 | 38,454,917 | 23,386,300 | 18,201,944 | 82,843,161 |
| INDIANA | 107,998 | 2,450,780 | 2,287,771 | 2,957,858 | 7,708,367 |
| IOWA | 4,808,520 | 664,000 | 7,859,000 | 1,056,403 | 8,868,048 |
| KENTUCKY | 753,848 | 664,000 | 7,859,000 | 1,056,403 | 8,868,048 |
| LOUISIANA | 5,890,000 | 5,147,483 | 5,147,483 | 200,000 | 5,347,483 |
| MARYLAND | 3,300,000 | 1,232,000 | 4,964,000 | 4,964,000 | 18,188,000 |
| MASSACHUSETTS | 27,200,000 | 33,043,148 | 29,066,981 | 38,078,927 | 127,386,028 |
| MICHIGAN | 7,180,177 | 12,875,871 | 12,875,871 | 17,182,585 | 38,908,313 |
| MINNESOTA | 9,806,687 | 3,278,400 | 3,278,400 | 1,402,639 | 14,587,706 |
| MISSOURI | 320,000 | 640,000 | 640,000 | 320,346 | 960,000 |
| MONTANA | 840,800 | 320,000 | 320,000 | 320,346 | 1,161,148 |
| NEBRASKA | 400,000 | 400,000 | 400,000 | 400,000 | 1,600,000 |
| NEVADA | 34,000,000 | 9,932,400 | 1,090,432 | 453,140 | 1,543,572 |
| NEW HAMPSHIRE | 18,000,000 | 18,000,000 | 18,000,000 | 31,400,000 | 93,332,400 |
| NEW JERSEY | 1,398,187 | 2,207,200 | 2,207,200 | 3,271,000 | 8,876,387 |
| NEW MEXICO | 1,398,187 | 2,207,200 | 2,207,200 | 3,271,000 | 8,876,387 |
| NEW YORK | 112,122,010 | 160,587,508 | 160,587,508 | 159,124,688 | 582,930,605 |
| NORTH CAROLINA | 190,000 | 344,000 | 344,000 | 327,100 | 504,000 |
| OHIO | 16,910,479 | 15,028,471 | 15,028,471 | 49,798,828 | 98,184,853 |
| OKLAHOMA | 800,000 | 628,000 | 628,000 | 540,000 | 1,968,000 |
| OREGON | 5,289,600 | 15,317,386 | 15,317,386 | 13,668,757 | 34,266,752 |
| PENNSYLVANIA | 20,038,508 | 30,482,000 | 30,482,000 | 202,146,200 | 253,068,709 |
| RHODE ISLAND | 4,448,434 | 3,312,000 | 3,312,000 | 5,164,412 | 14,320,414 |
| TENNESSEE | 1,000,000 | 398,600 | 398,600 | 1,136,000 | 2,495,600 |
| TEXAS | 11,053,813 | 28,742,980 | 28,742,980 | 37,132,663 | 76,929,456 |
| UTAH | 2,400,000 | 90,000 | 90,000 | 1,748,029 | 4,239,029 |
| VERMONT | 5,831,012 | 1,899,580 | 1,899,580 | 4,228,160 | 12,346,752 |
| VIRGINIA | 17,730,844 | 14,923,680 | 14,923,680 | 8,158,000 | 48,877,524 |
| VIRGIN ISLANDS | 6,104,197 | 1,380,780 | 1,380,780 | 8,158,000 | 7,484,947 |
| WASHINGTON | 15,189,096 | 9,321,648 | 9,321,648 | 5,468,118 | 29,875,858 |
| WEST VIRGINIA | 281,248 | 281,248 | 281,248 | 281,248 | 281,248 |
| WISCONSIN | 488,000 | 488,000 | 488,000 | 4,327,042 | 14,658,442 |
| TOTAL | \$303,849,787 | \$469,160,936 | \$609,682,801 | \$801,835,978 | \$2,184,529,499 |

AUDIT AREA: HIGHWAY ADMINISTRATION

PG
NO FINDINGS/RECOMMENDATIONS

AGREE/
DISAGREE COMMENTS/SUGGESTIONS

197 E6. PennDOT Has an Intelligent Transportation System Plan, but the Plan Lacks Time Frames and Does Not Address How Projects Are to Be Funded

Agree

Conclusion - PennDOT has developed, and is beginning to implement several components of, an Intelligent Transportation Systems (ITS) Strategic Plan for Pennsylvania. However, the plan does not have milestones or time frames for assessing progress nor does it identify potential funding sources. The plan also does not contain guidance or otherwise make provisions for cost-benefit analyses to evaluate the merits of individual ITS projects or to facilitate comparisons between projects.

Recommendation - Updates to the Commonwealth's ITS plan should identify milestones, with specific dates, for achieving ITS objectives; identify realistic funding sources for meeting these milestones; and provide guidance for cost-benefit analyses for proposed projects to help ensure that the analyses are complete and can be used for comparisons between competing projects.

- Page 198, last paragraph, included in the few states is the state of Washington
- Page 199, last paragraph, Pennsylvania has six early deployment planning studies completed or underway. The Philadelphia and Pittsburgh area wide studies and the Pennsylvania Turnpike study of the early deployment planning studies have been completed. The corridor early deployment study for I-79 (Erie to Pittsburgh), the institutional issues corridor study along the I-95 corridor in Philadelphia, and the area wide study for Scranton/Wilkes-Barre are currently ongoing. PennDOT also has submitted for FHWA and funding approval area wide early deployment program studies for Harrisburg and Allentown/Bethlehem.
- The intent of the Statewide ITS Strategic Plan was to present a broad-based document that would be followed by a more detailed ITS Implementation Plan that fulfilled the goals and objective outlined in the Strategic Plan. Since the LB&FC conducted their study, the following has been accomplished:
 - In October 1995 PennDOT finalized the Statewide ITS Strategic Plan which outlined a process that included working with our partners and key transportation stakeholders on the development of an Implementation Plan.
 - PennDOT developed \$5 million Early Action Projects which do contain milestones and completion time frames. In addition to the use of 100% state funds to implement the Early Action Projects, PennDOT is investigating the use of TRB "IDEA" program funds, CMAQ funds, SPR funds and /or other viable options.
 - In cooperation with our partners, PennDOT has begun developing an Implementation Plan which is focused on the 1997-98 State Fiscal Year, but also includes the efforts planned for the following four fiscal years (through FY 2000-2001).
 - The PennDOT/MAUTC Agreement will be utilized to evaluate the benefits that result from the Early Action Improvements. This effort is expected to result in a prototype benefit/cost analysis procedure to be used in evaluating all future ITS projects.

AUDIT AREA: ADMINISTRATION AND PLANNING

| PG NO | FINDINGS/RECOMMENDATIONS | AGREE/ DISAGREE | COMMENTS/SUGGESTIONS |
|----------|---|--------------------|--|
| 201 E7. | <p><u>Redevelopment of PennDOT Employees Due to the June 1994 Fire Has Been Delayed</u></p> <p><u>Conclusion</u> - A June 1994 fire in the Transportation and Safety Building resulting in the closing of four floors and required the immediate relocation of 321 PennDOT employees as well as 328 employees of other agencies (e.g., the Bureau of Professional and Occupational Affairs) with offices in the building. In January 1996, the Administration announced plans to demolish the building and rebuild on the same site at an estimated cost of \$218 million. Current plans are to relocate the remaining workers by September 1996.</p> | Agree | <p>In order to avoid the inefficiencies of operating out of six or seven separate locations, we redirected our relocation efforts toward two new well situated facilities. In August of 1995, we announced a completion date of September 1996. We are on schedule for relocation by that date.</p> <p>Page 201, paragraph 2, The fire also caused the release of asbestos, contained in fire partitions... (not ceiling tiles). *</p> <p>Page 202, paragraph 3, The moves are to occur in phases beginning in July 1996. (not June 1996); and The Safety Administration group is moving to the Riverfront Office Center... (instead of facilities) *</p> <p>Page 202, paragraph 4, As of May 1996, approximately 15 percent (not 20 percent) of the PennDOT headquarters employees... (instead of PennDOT employees). *</p> |

*LB&FC Note: These changes were made to the final version of the report.