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MANAGEMENT OF THE HIGHWAY PROGRAM

In fiscal year (FY) 1996-97, the Department of Transportation will spend \$1.58 billion on all transportation programs, including \$867.9 million on state and local highways. As of December 1996, the Department employed 3,745 staff, which was 61 staff less than in December 1988. Most of the decrease has occurred in the Division of Motor Vehicles, while there has been some increase in planning positions. Increasing demand for transportation spending requires the Department to ensure that all funds currently available are used effectively before additional funds are committed. Our review of highway program management indicates the Department has taken some steps to increase cost-effective use of existing resources, but continued management attention over several years would lead to needed improvements.

Engineering Costs Have Increased Sharply Since FY 1987-88

The cost of design and construction engineering within the highway program has increased 35.8 percent above inflation since FY 1987-88. As a result, in FY 1996-97, engineering costs are \$39.2 million more than could be expected from inflation alone. Some of the increase in engineering costs is related to mandated increases in staff salaries and expanded requirements for environmental studies. However, a major cause of the cost increase is associated with increases in engineering workload, which resulted from the rapid expansion of the major highway improvements program. This work includes developing environmental impact statements before major projects are selected; ongoing planning and preliminary design work even for projects that will not begin construction for eight or more years; and the design of large projects, including Highway 29 from Green Bay to Chippewa Falls. However, not all the causes of cost increases can be identified, making cost control difficult.

Additional Efforts to Control Costs Are Needed

The management information currently available to district staff and managers is insufficient to identify how costs can be controlled more effectively. Current systems could capture needed financial information, but they are not being fully utilized. All districts have not made full use of available automation to increase efficiency in engineering design.

In FY 1995-96, 24.6 percent of design projects required at least one addendum because of design errors that could have been prevented through better review by the engineers who designed the projects. The Department has established procedures for evaluating both design and construction engineering quality at the completion of each project, but these procedures are not always followed, and their results are not fully utilized. In FY 1995-96, non-budgeted costs for construction contracts totaled \$25.4 million. Efforts to control such costs will require improved methods for negotiating contract change orders after construction has begun.

Wisconsin Highway Construction Bids Compare Favorably with Those of Other States

In FY 1996-97, road construction contract awards are expected to total approximately \$470 million. Expenditures for highway construction projects have grown 6.1 percent above inflation since FY 1987-88, which is significantly less than the total increase in state and local highway program expenditures. In general, federal officials and others believe that the ready availability of commonly used construction materials and the highly competitive nature of the construction industry in Wisconsin have helped to limit construction cost increases. In FY 1994-95, 435 construction contracts were distributed among 113 different primary construction contractors. Prices for common construction materials are lower in Wisconsin than in most midwestern states. For example, the 1995 price paid for asphalt was \$22.05 per ton, third-lowest among six midwestern states, and well below the national average price of \$28.83.

The Department seldom assesses liquidated damages when projects fail to meet established completion dates because project delays are not always controllable, and because litigating disputed damage claims can be costly. Nevertheless, strengthening the process used in negotiating contract change orders, which increase project costs after the bidding process is complete, and routinely following established procedures for evaluating contractor performance could further control construction costs.

County Maintenance of State Highways Provides Benefits to Both Counties and the State

Inflation-adjusted expenditures for traffic and maintenance operations have declined 9.3 percent since FY 1987-88, but the maintenance program is satisfactory by several measures. Counties are concerned that current funding levels are inadequate to cover the cost of all work required by state maintenance manuals. Wisconsin is the only state to rely exclusively on counties to provide snowplowing, pavement patching, grass mowing, and other routine maintenance on state highways.

Contracting with the counties has allowed the Department to negotiate work priorities throughout the year as weather and road conditions warrant. Other jurisdictions' experiences contracting with private firms for maintenance work indicate the flexibility of Wisconsin's current arrangement would be difficult to maintain. Private contracting efforts in Massachusetts, Michigan, and the Province of British Columbia have not yet shown significant savings.

Management Improvements Could Result in Some Savings

The Department has taken steps to improve efficiency, such as establishing various performance measures and reducing the ratio of staff to managers from 4.7 to 1 in 1994 to 6 to 1 in 1997. Further reductions are planned. Continuing efforts to improve management can result in more cost-effective use of available funds over time. However, slowing the pace at which major improvements are completed, limiting the scope of rehabilitation projects to only essential safety improvements, or developing rehabilitation standards that place more emphasis on cost reductions will be required if the State's goal is to limit growth in highway program spending.

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