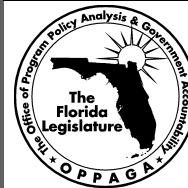




## Office of Program Policy Analysis And Government Accountability



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# Follow-Up Report on the Florida Department of Transportation's Performance in Controlling Construction Cost Overruns and Establishing Accountability for These Problems

### Abstract

- **Completing transportation projects on time and within budget has been a chronic problem for the Florida Department of Transportation. Although all cost overruns cannot realistically be eliminated, last year's performance improved in these areas. Cost overruns are down from 12.8% to 12.3% and time overruns are down from 34.5% to 30.6%. However, it is too early to say that this trend of reduced cost overruns and delays will continue.**
- **The department has initiated steps to implement all our recommendations for improving the quality of transportation construction design plans prior to letting contracts for bid and in the performance evaluation and consultant selection processes. But monetary recovery of overruns that do not add value remains problematic.**
- **The Legislature needs to monitor the department's initiatives to assess the impact on reducing cost overruns and time delays and hold responsible parties accountable for costs that do not add value.**

### Purpose

In accordance with state law, this follow-up report informs the Legislature of actions taken by the Department of Transportation in response to our 1996 report.<sup>1, 2</sup> This report presents our assessment of the extent to which the department has addressed the findings and recommendations included in our report.

### Background

State law requires the Florida Department of Transportation to build and maintain the state highway system in the most cost-effective manner. The department follows a multi-step process in constructing transportation projects. Through a cooperative planning process that involves state, regional and local government officials and the public, FDOT identifies transportation needs and develops a five-year work program. The work program, which is updated annually, identifies the transportation projects that will be undertaken during the five-year period and the estimated costs of these projects.

Although construction contracts specify the price to be paid and the amount of time allowed for a project to be completed, the department may agree to changes in

<sup>1</sup> Section 11.45(7)(f), F.S.

<sup>2</sup> *Review of the Florida Department of Transportation's Performance in Controlling Construction Cost Overruns and Establishing Accountability for These Problems*, Report No. 96-21, November 27, 1996.

contract provisions. These changes generally are made through supplemental agreements to contracts. Cost overruns and time extensions can be either avoidable or unavoidable. Overruns due to design plan or project management problems are avoidable because they could have reasonably been foreseen and prevented. However, some cost overruns are unavoidable because they cannot be reasonably prevented, such as those due to unanticipated events.

Cost overruns may add value to projects by producing a better product. Overruns may add value when extra work is done that produces a better roadway for citizens, such as adding an access road to a project. Overruns may also add value when they involve work that was omitted from design plans but clearly needed to be done, such as adding sod to control erosion.

However, some overruns may not add value and represent wasted money if they do not result in a better product. For example, no value is added when a contractor puts down an asphalt roadway, but then has to tear it out and replace it due to faulty design specifications. The Florida Transportation Commission reports that cost overruns totaled \$143.8 million in Fiscal Year 1997-98 of which \$5.5 million did not add value.

### Prior Findings

Our prior report found that in a sample of projects completed between July and December of 1995, the department experienced \$28.6 million in cost overruns. Over half this amount (\$15.6 million) was classified as avoidable costs, and \$4.2 million of these costs did not add value for citizens and represented wasted money. Although these costs were avoidable we found no indications that the department had acted improperly.

We found that responsibility for cost overruns was shared among consultants retained by the department, third parties, and department staff. However, the department's administrative mechanisms to hold those responsible for cost overruns were not being followed and had limitations. First, although the department was to provide grades to consultants at the completion of each project, staff frequently did not issue performance grades as required. Without these grades,

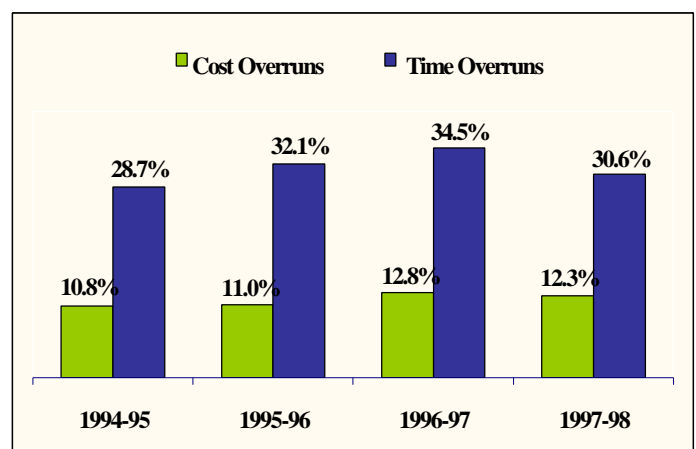
staff lack information on these consultants' performance when awarding new design contracts. Second, although the department conducted annual performance appraisals of its in-house design staff, these evaluations generally did not include issuing grades for projects the staff had either designed or provided research services. Lastly, although the department has the authority to recover cost and recommend suspending licenses from engineers for design errors and omissions, it frequently did not do so.

We made nine recommendations to the department for reducing cost overruns and improving accountability when cost overruns occur. These recommendations generally fall into two categories: (1) strategies for reducing cost overruns prior to letting contracts for bid, and (2) administrative methods for establishing accountability and recovering cost overruns from consultants.

### Current Status

The department has addressed all of our recommendations. It has developed strategies to reduce cost overruns prior to letting contracts for bid. It also has improved its administrative methods for establishing accountability. However, recovering costs from consultants for cost overruns continues to be problematic.

**Exhibit 1**  
**The Department of Transportation's**  
**Construction Cost and Time Overruns**  
**Decreased Slightly in Fiscal Year 1997-98**



Source: Florida Transportation Commission

As shown in Exhibit 1, project costs and time to complete projects had increased in each Fiscal Year from 1994-95 through 1996-97. However, in Fiscal Year 1997-98 cost and time overruns improved. Average cost overruns were reduced from 12.8% to 12.3% of initial project budgets, and time overruns were reduced from 34.5% to 30.6% of project schedules. However, these results are from a single year and it is still too early to determine whether the department has resolved these problems.

### ***Actions Taken***

#### **The department has developed strategies to reduce cost overruns prior to letting contracts for bid.**

The department reports that it has developed cost reduction strategies. These strategies include enhanced on-site reviews to better identify actual site conditions, performing engineering reviews that examine whether projects can be readily built as designed, and enhanced training for staff and consultants on contract management. Also, project teams are being established, and meetings are held periodically with design and construction personnel to discuss supplemental agreements and time extensions. Finally, alternative contract procedures have been implemented and are being evaluated for success in reducing contract time.

The department has also increased its efforts to coordinate with third parties, such as local governments and utility companies. For example, the department has initiated a “partnering” process to address potential construction conflicts during the initial construction phase. In addition, the department is increasing its efforts to locate underground utilities prior to construction and to clear trees at the same time utility lines are moved. And it has developed community awareness plans for each project to make sure public involvement occurs. This additional up-front cost is expected to pay dividends in reducing project delays if these occur during construction.

#### **The department has also improved its administrative methods for establishing accountability. However, recovering cost from consultants continues to be problematic.**

The department provided guidance to the districts and a workshop was held pertaining to its supplemental

agreement tracking system. This should improve its ability to determine responsibility for cost and time overruns on transportation projects.

Second, the department reports that it has improved the timeliness of completing consultant grades. In 1996 the department lacked final consultant grades for about 33% of its projects. In 1997 the department lacked final consultant grades for only 4% of its projects. The department reports that managers have been going back and “catching up” earlier missing grades and are now entering the grades sooner after completion of the design contracts. This information gives those involved in future selection a better data base to use in their analysis.

Third, since construction projects can last several years, an interim grade would provide more timely information to the department as new design contracts are being awarded. The department reports that there has been an increase in the number of constructability grades completed in the tracking system. However, the time since this requirement was implemented has not been sufficient to have enough data to make any kind of beneficial analysis. The department reports that it will conduct a quality assurance process review to ascertain the benefits of the grade.

Fourth, the department modified its personnel policies and procedures for evaluating department staff who are involved in the design process. A letter is sent to in-house designers when avoidable no-value added issues occur. It is constructive in nature, letting staff know of areas where improvements must be made.

Fifth, the department modified its professional consultant work performance evaluation form to include whether plan errors or omissions by the consultant had an impact on construction costs and schedules. Additionally, the department reports that the quality component of its professional consultant work performance evaluation has been increased to 50% of the consultants’ total grade. The information on supplemental agreements for a particular firm or designer is available for use by staff in making future consultant selections.

Lastly, the department has established a threshold criterion for pursuing recovery of cost overruns from consultants.<sup>3</sup> However, a recent report issued by the department's inspector general found that problems in the department's procedures to recover cost overruns from consultants continued to exist.<sup>4</sup> The inspector general's report cited four problems with the cost recovery process:

- The department has not generally pursued monetary recovery from design consultants for substandard design plans, which resulted in additional construction costs.
- The department procedures generally were not followed.
- Some districts did not have effective monitoring systems that would prompt recovery actions for design errors and/or omissions at established thresholds.
- The definition of "premium cost" is not sufficiently precise to permit consistent determination and accurate application by the districts.

The report cited that district staffs were reluctant to pursue recoveries for a variety of reasons.

- There is shared responsibility in that the department staff reviews all design plans.
- District construction staff does not inform district design staff of design errors in a timely manner.
- Design consultants are not notified early enough in the process to advise or mitigate damages.

<sup>3</sup> The department's threshold for pursuing recovery of cost overruns for a single occurrence of a design error was set at \$10,000. There are smaller project amounts that can result from multiple supplemental agreements. When these costs accumulate to an amount exceeding \$25,000, recovery is to be pursued.

<sup>4</sup>The Florida Department of Transportation, *Recoveries From Designers For Defective Plans*, Report No. 02C-8006, September, 1998.

- The collection process is cumbersome.
- The department is production oriented and a major focus is on building roads as expeditiously as possible to avoid delays.
- There is a reluctance to take recovery actions against design consultants with whom the department must work closely.

Because of the reluctance to pursue recovery from designers for design errors and/or omissions, the department in some cases incurred additional construction costs for which it was not compensated.

In addition, it is our opinion that, without a sufficiently precise definition of "premium costs" to permit consistent determination and accurate application by the districts we question the reliability of the cost overruns that did not add value. The Florida Transportation Commission reported that avoidable cost overruns that did not add value during Fiscal Year 1996-97 were \$5.0 million. During Fiscal Year 1997-98 avoidable cost overruns that did not add value was \$5.5 million. However, due to the problems cited above, we could not conclude whether this figure was reliable.

In response to the inspector general report, the director of the Office of Design said that a task team would be established with the goal of evaluating the current processes related to recovery and making recommendations for improvement. The team will be charged with submitting recommendations for implementation by July 1, 1999.

Due to the potential cost impact to Florida's taxpayers, we believe that the Legislature should monitor the department's initiatives and the impact these efforts have on reducing cost overruns and time delays and holding those accountable for any cost that do not add value to Florida's citizens.

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