



# Arizona Department of Transportation

## Office of the Director

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Debbie K. Davenport  
Auditor General  
2910 North 44<sup>th</sup> Street  
Phoenix, Arizona 85008

Dear Mrs. Davenport:

Thanks to you and your staff for the professionalism displayed during the Sunset Review of the Arizona Department of Transportation, Intermodal Transportation Division and the Office of Audit and Analysis.

### **Finding 1: ADOT should optimize internal resources to reduce consultant usage.**

#### **Recommendation 1:**

#### **1. To better ensure that it develops competency internally and reduces costs, ITD should aggressively seek to:**

- a. Fill existing vacant employee positions with competent staff;
- b. Identify ongoing, recurrent work related to project design, construction management, and other similar functions currently provided by consultants and perform these services in-house when appropriate; and
- c. Continue to develop strategies to recruit and retain staff, and consider mentoring, succession, and other programs to help reduce the impact of employee turnover and retirements.

#### **Recommendation:**

- a. **Fill existing vacant employee positions with competent staff;**

#### **Agency Response:**

The finding of the auditor general is agreed to and the audit recommendation will be implemented.

We concur with the Report's emphasis on optimizing use of internal resources to reduce consultant usage, while keeping our focus on the goal of meeting the increasing demand for new highway construction as the population grows.

However, the current salary structure has made it difficult to hire and retain staff in the engineering and technical positions. Vacancies in ADOT's engineering positions have



ranged between 23% and 28%. We acknowledge that it is probably unreasonable to try to compete directly with the private sector on salary in the current economy where the demand for engineering services is so high. However, ADOT continues to lose junior and journey level staff to the cities, counties, and the private sector.

In the FY 2002 budget, ADOT requested, and was granted a new salary structure for engineers and certain other technicians. However, to fully implement that Plan, legislative appropriations are needed. Those appropriations have not happened.

In the meantime, the workload increase, as a result of delivering the highway construction program in 7.5 years instead of the planned 14 years, has made it critical and necessary to utilize consultants in the absence of adjustments to the current salary structure. ITD has been performing twice the work with 3/4 of the authorized staff, ultimately requiring the increased use of consultants.

Hence, ADOT will continue to try to fill vacancies and develop recruit and retain strategies, but without adequate funding for these positions, the prospects for success are problematic. For a list of strategies ADOT has employed, see the Agency Response for recommendation 1c.

**Recommendation:**

- b. Identify ongoing, recurrent work related to project design, construction management, and other similar functions currently provided by consultants and perform these services in-house when appropriate;**

**Agency Response:**

The finding of the auditor general is agreed to and the audit recommendation will be implemented.

ITD uses a management level process to determine consultant needs based on project schedule and the availability of in-house staff, as well as the expertise requirements on the projects. ITD uses this process to evaluate the need for consultants on any given project. Additionally, one clear distinction must be drawn in this analysis, specifically with regard to the contractors that are utilized to construct the highways versus the consultants that are utilized in the design, development, project management, inspection and testing processes. The statutes require ADOT to utilize private contractors to construct the highways.

**Recommendation:**

- c. Continue to develop strategies to recruit and retain staff, and consider mentoring, succession, and other programs to help reduce the impact of employee turnover and retirements.**

**Agency Response:**

The finding of the auditor general is agreed to and the audit recommendation will be implemented.



ADOT has utilized the following strategies in an attempt to improve recruitment and retention efforts:

- Adjusting engineering entry-level salaries.
- Summer intern program to recruit college engineering students (pre-Engineering In Training).
- Advertising engineering positions during the winter in the mid-west and east coast newspapers (sunshine ads).
- Making counteroffers to employees who have received offers of employment from external agencies or companies in an effort to retain valuable employees.
- Piloting a talent management effort in an attempt to identify and develop core competencies.
- Hiring a recruitment specialist to focus on recruitment of engineers and technical staff.
- Providing individual salary adjustments for engineers exhibiting exceptional performance in an effort to retain them.
- Hiring return-retirees who have valuable skill sets.
- Recruiting and developing construction technicians by providing a technical training and certification program to hire individuals at their appropriate level of experience. If positions are underfilled, the training and certification program and On the Job Training (OJT) work experience allows inspectors to advance as the requirements are completed at each level.
- EIT's and Summer Engineering Interns are part of ITD's mentoring and OJT training programs. The intent of these programs is to expose engineering students and new engineering graduates to multiple facets of the transportation environment and identify their specific interests and skill set. The hope is that by helping them self-direct to an area suited to them, ADOT will be able to improve retention.
- A requirement for coaching (mentoring) has been built into the technical training programs as identified in the training matrices for the Construction Technicians series.

**Recommendation:**

**2. To better ensure that it identifies and maintains the proper level of consultant usage, ITD should:**

- a. Develop division-wide criteria for deciding when to use a consultant to complete projects or tasks, and
- b. Develop methods of tracking and monitoring consultant usage, such as compiling data on the dollar amount, quantity, and type of projects or services completed by consultants, and reasons for using consultants or other relevant information, and evaluate information to identify consultant services that could be more cost effectively provided by in-house employees.

**Recommendation:**

- a. **Develop division-wide criteria for deciding when to use a consultant to complete projects or tasks.**

**Agency Response:**

The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

ITD uses a management level process to determine consultant needs based on project schedule, availability of in-house staff and expertise requirements on the project. ITD uses this process to evaluate the need for consultants on any given project.

ITD has utilized a construction manpower management program for over 25 years. The current program, Construction Manpower Program (CMP), projects personnel needs based on the 5-year construction program requirements. This tool is used to determine what level of outside consultant assistance may be required beyond authorized Construction FTE (Full Time Equivalent) positions. Based on that analysis, the Construction Group works with Engineering Consultant Services to determine the types of contracts necessary to assist the Districts in their construction contract administration and construction materials testing assistance.

Presently four types of contracts have been identified in our Departmental Strategic Plan:

- Temporary Technical Engineering Personnel.
- On-Call Construction Contract Administration (\$5 million maximum contract estimate).
- Acceptance Materials Testing (\$750,000 contract value).
- Contracts over \$5 Million bid estimate are advertised for competitive selection of qualified consultant firms.

This program is administered statewide for ITD. Additionally, ITD will also work with local jurisdictions not certified by FHWA to administer their own projects to ensure that supplemental consultant services are procured for those projects.

**Recommendation:**

- b. **Develop methods of tracking and monitoring consultant usage, such as compiling data on the dollar amount, quantity, and type of projects or services completed by consultants, and reasons for using consultants or**



**other relevant information, and evaluate information to identify consultant services that could be more cost effectively provided by in-house employees.**

**Agency Response:**

The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

The consultant contract program is used only when the workload in ADOT precludes an in-house effort or when a special expertise is required.

ITD tracks and monitors consultant usage in great detail. These contract expenditures are tracked multiple ways (i.e., by task, by firm, by TRACS number, and by individual employee).

Tracking begins as the District communicates their need. If no internal resources are available to meet the need, statewide requests are pooled and the Construction Group evaluates the services required and retains the consultant best able to provide the needed services.

Throughout the life of the contract, multiple levels of review, approval and evaluation are employed. The Construction Org assigns the work and approves the timesheet. District reviews all billings and is aware how the consultant personnel are being utilized, projects being charged and progress in completing assigned work. The Construction Group reviews and approves monthly consultant billings to determine that proper rates are being charged, back-up supporting documentation is complete, ADOT policy is followed and project funding is sufficient to process the billing. A detailed log record tracks the progress of the billing from receipt to payment.

The Construction Org evaluates the performance of the individual consultant at the end of each assignment. The Construction Group compiles and utilizes that data to determine future assignments.

ITD, Development Group, through ECS' Consultant Contract Management application, tracks and monitors consultant and contract information from "cradle to grave". Currently this application is being reviewed for maintenance and enhancement of its capabilities. The maintenance portion should be complete by the end of this calendar year.

Our present application, captures contract dollars, contract time, type of services, compensation type, contract modifications, and payment information. As a result, we are able to monitor and report project expenditures by consultant, by service, by contract or by TRACS number. Other relevant information currently being captured are as follows: consultant firm information, overhead/audit history, contract wage rates by classification, consultant evaluations and work assignments as a prime or as a

subconsultant, etc. Quantity information may be found in hard copy format in the contract file.

**Finding 2: ITD should improve implementation and documentation of inspection process.**

**Recommendation:**

1. To ensure that the checklist results are determined in a consistent manner, ITD should assess how field inspectors and independent QA inspectors are interpreting the checklist items. Further, ITD should provide training and/or develop guidelines to help field inspectors and independent QA inspectors interpret the checklist items in a similar manner.
2. To comply with department policy and FHWA inspection practices, ADOT should ensure that field inspectors document inspection results, including:
  - Whether work conforms to plans and specifications;
  - Whether problems occurred; and
  - Problem resolution.
3. To comply with department policy, ADOT should ensure that field inspectors complete and submit checklists as part of their daily diaries, and document that critical and major items were addressed.
4. To help ensure that checklists meet field inspectors' needs and contain applicable content, ADOT should consider a checklist revision process that includes knowledgeable field inspectors.
5. ADOT should require follow-up on independent QA inspection results that identify critical or major noncompliance.

**Agency Response:**

The finding of the auditor general is agreed to and the audit recommendation will be implemented.

1. ITD will correlate the checklist scoring between the two groups to ensure that there is consistency. Additionally, training courses will be assessed to ensure that they provide appropriate guidelines to interpret the checklist items.
2. The Construction Group will work with the individual Orgs and through training to emphasize the importance of proper documentation of all pertinent data that daily diaries should include, as detailed in the Construction Manual.
3. The Assistant State Engineer, Construction, will issue a Construction Bulletin by August 1, 2006, directing checklist compliance. Additionally, training will be developed that clearly outlines how to properly document daily diaries.
4. The Construction Group will formalize the process of documenting checklist revision procedures, including the inclusion of knowledgeable field inspectors on checklist revision teams.



**Finding No. 3: ADOT needs to improve audits of design and construction contracts.**

**Auditor General Recommendations:**

**1. The Office should continue its efforts to:**

- a. Fill vacant positions and, if necessary, develop new recruitment strategies. If the Office cannot fill positions with experienced auditors, it might consider hiring auditors without cost accounting experience and providing training or offering an internship program.
- b. Implement performance measurements to monitor its production and work activities. This should include the number and types of audit requests received and conducted, the timeliness of completing audits, and audit results.
- c. Ensure that the highest-risk projects are audited by applying a risk-based approach to selecting and conducting audits that considers items such as staffing available to complete audits, dollar thresholds at which audits should be conducted, and office audit requirements for each type of contract.
- d. Replace its database system and obtain a system that can track and schedule workload and measure production.
- e. Annually estimate its workload and prioritize its audits based on available resources. This plan should be documented in an annual audit work plan and revised with changing circumstances.
- f. Revise its audit manual to reflect changes in business practices and ensure that it provides adequate audit coverage of department projects.

**Agency Response:**

The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

As indicated on page 32 of the report, the Department is taking steps to address the findings of the Auditor General. All vacant positions in the Office of Audit and Analysis are being filled, performance measurements are under development, a new audit management system is being implemented, and audits have been prioritized based on risk and incorporated into the draft 2007 audit plan. That plan will be periodically reviewed and modified, as circumstances require. In addition, the Department will be exploring the use of Certified Public Accountants to expedite the completion of required audits.

Implementation of all corrective actions is on schedule, except two positions in the Office of Audit and Analysis remain vacant. Although the Office is staffed at 92% of capacity, efforts are continuing to fill those positions.

Sincerely,

Victor M. Mendez