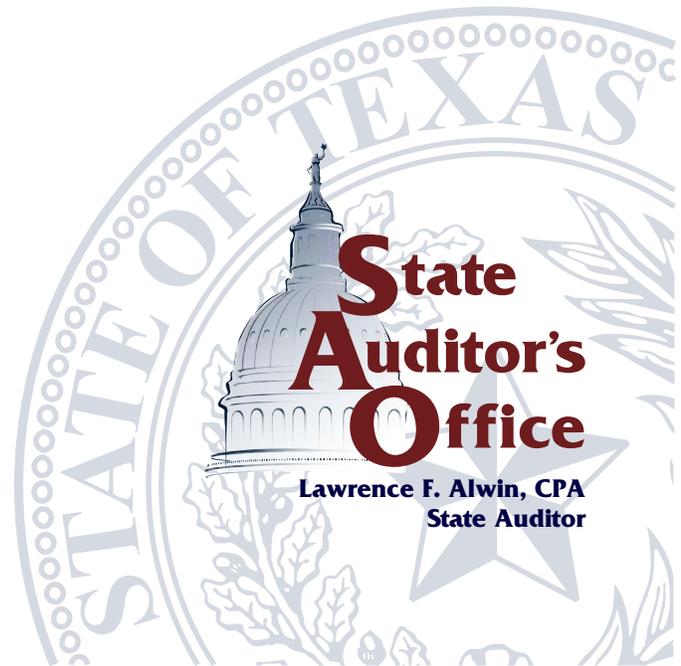


An Audit Report on

The Department of Transportation's Management of the Statewide Traffic Analysis and Reporting System

May 2004

Report No. 04-028



Department of Transportation's Management of the Statewide Traffic Analysis and Reporting System

Overall Conclusion

After spending at least \$9.8 million and more than four years on the development of its Statewide Traffic Analysis and Reporting System (STARS) project, the Department of Transportation (Department) may not be able to complete or rely on the system. Poor management of the project and the related contracts resulted in the following:

- **Delays.** It is unlikely that STARS will be completed by August 2004 as planned because the Department no longer has a vendor working on STARS's development (see text box). Also, the project had missed key milestones before the contract was terminated.
- **Cost increases.** The cost for Phase I of the project increased by \$2.8 million, or 154 percent, to compensate the vendor for delays and additional work. This amount includes \$501,066 in inappropriate payments to the vendor.
- **Questionable functionality.** The Department reports that portions of STARS are not working as intended. In addition, the Department does not know what work the primary vendor completed prior to the termination of its contract.

Statewide Traffic Analysis and Reporting System (STARS)

STARS was intended to be a new automated system to support traffic data collection, analysis, and reporting. The system was to address legacy system deficiencies identified in a Federal Highway Administration process review in 1995. Also, STARS was to serve as the State's traffic monitoring system in accordance with federal regulations.

When STARS began development in October 1999, the Department estimated that its payments to the primary vendor would total \$6.9 million and that the project would be completed by August 2004. The project was designed to be developed in two phases.

In December 2003, the Department and the primary vendor terminated their contract because of a dispute over an unsupported invoice for \$350,783. As of December 2003, the Department had paid the vendor more than \$6.8 million for portions of STARS that the Department reports are not working as intended.

According to the Department's accounting system, expenditures for the project overall are at least \$9.8 million. These expenditures include payments to the primary vendor and secondary vendors, plus some of the Department's internal costs.

Key Points

The Department Did Not Adequately Manage the STARS Project

The Department's Transportation Planning and Programming Division management did not sufficiently oversee the STARS Project Management Team. This allowed the team to make questionable decisions related to contract administration.

The structure of STARS project management created a serious lack of segregation of duties. Conflicting roles and responsibilities within several levels of STARS project management and undocumented decisions created opportunities for one person to change project deliverables, accept deliverables upon completion, and authorize invoices for payment without management's knowledge.



The Department's Mismanagement of the Contract with the Primary STARS Vendor Led to Cost Increases and Delays

The Department's Project Management Team did not adequately administer the contract with the primary STARS vendor:

- We identified three payments for delays totaling \$501,066 that the Project Management Team and the vendor misrepresented. The contract did not allow for payments for delays; therefore, the Project Management Team could not legitimately compensate the vendor for project team delays.
- The contract did not establish a realistic timeframe for reviewing the vendor's deliverables. Additionally, amendments to the contract renamed, deleted, added, combined, and divided deliverables, making it difficult to account for changes to the project's deliverables.
- The length of time the Project Management Team took for its review of the vendor's Phase I deliverables exceeded the contractually established milestones by more than a year. Consequently, payments to the vendor were delayed and the vendor threatened to quit the project in December 2000.

The Department Also Did Not Follow Sound Contracting Practices When Contracting with the Department of Information Resources

The Department did not ensure that its contracts with the Department of Information Resources (DIR) related to STARS were in the Department's best interests. These contracts are in addition to the Department's contract with the primary STARS vendor. Specifically:

- The Department took DIR's advice to create a contingency fund with \$350,783 in available dollars and call it a work plan deliverable. This advice contradicted guidance provided by the Department's Contract Services Office. Furthermore, the vendor's invoice for this contingency fund was unsupported, which led to the dispute that resulted in the termination of the contract.
- Rather than being paid according to the value of the services it provided, DIR was paid 2.5 percent of each payment that the Department made to its vendors. DIR was paid \$12,526 for the \$501,066 delay claims misrepresented as deliverables. It stood to be paid \$8,770 for the \$350,783 contingency fund that it recommended the Department create.

Summary of Management's Response

The Department of Transportation and Department of Information Resources agree with our recommendations and indicate that they will implement our recommendations.

Summary of Objectives, Scope, and Methodology

The objectives of this audit were as follows:

- Are major information project controls adequate to ensure that the project will be delivered on schedule, on budget, and with the desired level of user functionality upon implementation?
- Does project management have adequate and complete project planning documents, an adequate plan to address potential risks, and an adequate process to manage changes to the project?
- Is the status of the project adequately tracked so management can determine whether progress is acceptable given the amount of time and funds already spent?
- Are the actual costs incurred and projected cost estimates adequately supported?
- Does the administration of contracted services ensure appropriate use of state funds?

The scope of this audit was limited to the review of the Department's administration of the contracts related to STARS for the period of October 1999 through January 2004. Our audit included a review of the contracts, a determination of the accuracy of the expenditures, and an assessment of the effectiveness of the Department's management of the project. We did not audit the system's general or application controls.

Statute requires the State Auditor's Office to participate on the Quality Assurance Team (QAT), which approves and monitors major information resource projects. Our involvement in the QAT did not affect our audit conclusions.

Table of Results and Recommendations

The Department did not adequately manage the STARS project. (Page 1)

The Department should take the following steps on all future information technology projects, including the completion of STARS:

- Separate responsibility for establishing deliverables, approving deliverables, and authorizing invoices for payment among groups and employees to reduce conflicts of interest.
- Ensure that employees' contracting decisions receive an appropriate level of oversight.
- Do not allow vendors an opportunity to participate in evaluating their own work and authorizing payments to themselves.
- Document management approval of changes that affect a project's time line, budget, and functionality in accordance with any established change control procedures. If these decisions occur during committee meetings, maintain minutes that document the place and time of the meeting, who is present and who is absent, and a summary of discussions and decisions.
- Report the correct amount of STARS's cumulative project expenditures to the QAT, and ensure that reports for future projects are accurate.
- Track all expenditures associated with any information technology project that meets the QAT's definition for a major IT project, which is currently any project with estimated costs of at least \$1 million.
- Ensure that State Planning and Research Program annual reports meet the required minimum reporting requirements, and inform the FHWA as soon as problems affecting project objectives become known.

The Department paid the vendor \$501,066 for misrepresented deliverables. (Page 5)

The Department should enforce the agreed-upon payment methodology. If the need arises to change a future contract's provisions, the Department should amend the contract after getting appropriate approvals to do so rather than disregarding the provisions.

A contract provision and amendments contributed to delays and misuse of funds. (Page 6)

The Department should:

- Consider all the reviews that need to occur when establishing timeframes for the review of deliverables.
- Ensure that amendments are consistent with guidance from its legal counsel.
- Ensure that all changes to a project's deliverables are approved by subject matter experts and project management.

DIR should indicate in its contracts with other agencies that DIR does not provide legal counsel, and it should require that the agencies have their own legal counsels review contracts and amendments.

Poor contractor oversight led to delays and cost increases. (Page 8)

The Department should:

- Take advantage of financial incentives, such as those for completing reviews in a timely manner.
- Follow contractually established change control procedures.
- Ensure that those who process payments are aware of authorized individuals and enforce proper payment authorization.

The Department also did not follow sound contracting practices when contracting with DIR. (Page 10)

The Department should:

- Exercise due diligence when evaluating advice and services from vendors to ensure that the State's interests are protected.
- Consider entering into contracts with DIR specifying a per-service fee instead of a fee based on a percentage of vendors' costs.
- Ensure that the scope of work to be performed by vendors accurately describes expected services and products.

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Detailed Results

Chapter 1

The Department Did Not Adequately Manage the STARS Project

The Department of Transportation's (Department) Transportation Planning and Programming Division (Division) management did not sufficiently oversee the Statewide Traffic Analysis and Reporting System (STARS) Project Management

The Status of STARS Is Uncertain

The Department does not know what work the vendor completed before the contract was terminated. Therefore, the Department has not been able to determine what still needs to be done or how much it will cost.

The Department reports that it plans to assess the status of what the vendor completed, which will be difficult given that the Department did not secure key system information from the vendor before allowing the vendor to terminate the contract.

Until STARS is operational, the Department must continue to gather, analyze, and report traffic data in a manner that the Federal Highway Administration criticized for not meeting federal guidelines. These guidelines are designed to ensure that states report accurate and consistent data.

Team. This allowed the team to make questionable decisions related to contract administration, which resulted in delays, cost increases, and questionable functionality. (Chapters 2 and 3 discuss these decisions in detail.) In addition, the mismanagement of the STARS project could affect the Department's federal funding. Federal funds accounted for 80 percent of the \$9.8 million spent on STARS to date.

Inadequately segregated duties and undocumented management decisions led to poor contract administration and, ultimately, the project's current situation.

The structure of STARS project management created a serious lack of segregation of duties. Conflicting roles and responsibilities within several levels of STARS

project management and undocumented decisions created opportunities for one person to change project deliverables, accept deliverables upon completion, and authorize invoices for payment without management's knowledge.

Segregation of duties. Executive and Division management allowed a Division employee to have multiple key roles in STARS management: Project Sponsor, Chair of the Project Board, and Chair of the Steering Committee. In addition, this person inappropriately assumed the Executive Sponsor's authority to approve changes to the project's deliverables. Assuming this authority allowed this person to delete and modify deliverables without the approval of executive management or the other members of the Project Board and Steering Committee.

Executive and Division management allowed this person to maintain responsibility for STARS even after the Department's internal auditor identified in February 2003 that this person violated the Department's conflict of interest policy when overseeing a contract unrelated to STARS.

Undocumented decisions. Inadequately documented management decisions prevent us from determining in what capacity this individual acted when renegotiating the contract, changing deliverables, and approving the changed deliverables for payment. We also could not determine whether other members of the Project Board and Steering Committee were consistently informed of this person's actions because the documentation that the Project Management Team maintained did not contain the results of these groups' meetings and decisions.

The primary STARS vendor also had conflicting roles and responsibilities. The vendor was a member of the Project Board, which had the authority to accept deliverables from the vendor and approve vendor invoices for payment. Again, inadequate documentation of management decisions makes it difficult to tell whether the vendor did, in fact, participate in reviewing its own work and approving its own invoices for payment.

In addition, when changing project deliverables, the Project Management Team circumvented contractually established change control procedures. These procedures required the team to obtain the Project Board's approval when changing project deliverables. (Chapter 2-C contains more information.)

The Department Provided Inaccurate and Incomplete Information to External Oversight Entities

The STARS Project Management Team reported its cumulative project expenditures to the Quality Assurance Team (QAT) to be at least \$5 million more than was recorded in its accounting system. As a result, the members of the Legislature and QAT did not have accurate information with which to monitor the project. The Department was unable to provide any support regarding the amounts it reported to the QAT. Because of our audit, the Department informed QAT in July 2003 that it had misreported the STARS expenditures and that it planned to take corrective action.

Additionally, the Project Management Team did not track all the expenditures associated with the project, such as the Department's internal project management costs. The Department's project sponsor, some of the Department's STARS board members, and some of the Department's Steering Committee Members have not been charging their time to the project when they perform project-related duties and activities. The Department's accounting system shows expenditures of \$9.8 million as of December 2003; however, this amount does not include some internal project management costs.

The Department's annual performance and expenditure reports to the Federal Highway Administration (FHWA) did not meet the federal State Planning and Research Program's minimum reporting requirements. The Department did not notify the FHWA of changes to STARS's scope, time line, and cost that affected the project's objectives. Federal rules require the Department to "report events that have significant impact on the work as soon as they become known. These events or conditions include problems, delays, or adverse conditions that will materially affect the ability to attain program objectives."

Recommendations

The Department should take the following steps on all future information technology projects, including the completion of STARS:

- Separate responsibility for establishing deliverables, approving deliverables, and authorizing invoices for payment among groups and employees to reduce conflicts of interest.

- Ensure that employees' contracting decisions receive an appropriate level of oversight.
- Do not allow vendors an opportunity to participate in evaluating their own work and authorizing payments to themselves.
- Document management approval of changes that affect a project's time line, budget, and functionality in accordance with any established change control procedures. If these decisions occur during committee meetings, maintain minutes that document the place and time of the meeting, who is present and who is absent, and a summary of discussions and decisions.
- Report the correct amount of STARS's cumulative project expenditures to the QAT, and ensure that reports for future projects are accurate.
- Track all expenditures associated with any information technology project that meets the QAT's definition for a major IT project, which is currently any project with estimated costs of at least \$1 million.
- Ensure that State Planning and Research Program annual reports meet the required minimum reporting requirements, and inform the FHWA as soon as problems affecting project objectives become known.

Management's Response

The Department concurs:

- *This audit has been very beneficial to the Department in addressing the issues with the STARS project. The Department has a process in place for managing information technology projects and associated contracts for programming services. Generally, Department information technology projects have a project board and management team established with segregated roles, responsibilities and approval authority for the development of deliverables, approval of payments and authorization of invoices. These processes were not followed on the STARS project.*
- *The Department will ensure that employees' contracting decisions receive the proper level of management oversight and that management's role is not subordinate to that established by a project sponsor, project management team or project steering committee. For the STARS project, all contract administration functions will be segregated under a contract administrator within the Administration Section of the Division. The contract administrator will track and monitor contractual compliance and when appropriate, seek counsel from its Office of General Counsel, Contract Services Section to assure contractual procedures are in the Department's best interest.*
- *The Department will ensure vendors do not participate in the evaluation of work or authorization of payment.*
- *The Department will document management approval of changes that affect a project's timeline, budget, and functionality in accordance with established*

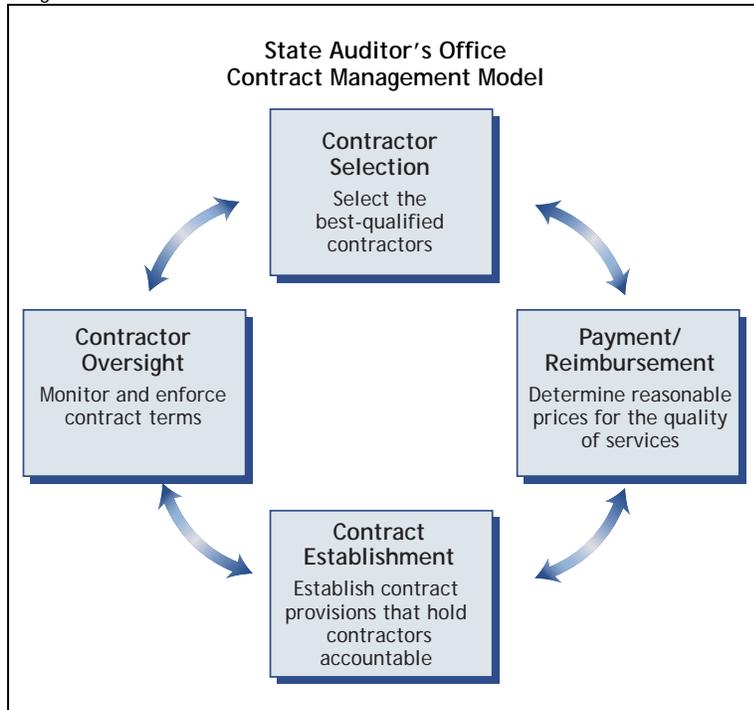
change control procedures. If the decisions occur during committee meetings, the Department will ensure an accurate documentation of meeting minutes, including review and approval of committees/boards, the place and time of the meeting, who is present and absent, and a summary of discussion and decisions that document management approval of changes that affect a project's time line, budget and functionality. All documents will be kept in accordance with the Department's approved record retention schedule and until all audit requirements are met.

- The Department will ensure that cumulative project expenditures for the STARS project are accurately reported to the QAT and ensure the reports for future projects are accurate.
- The Department will ensure the tracking of all expenditures associated with any information technology project that meets the QAT's definition for a major IT project.
- The Department will ensure that the State Planning and Research (SPR) performance and expenditure report meets the minimum reporting requirements of 23 CFR 420.117. The Department will inform the FHWA as soon as impacts to project objectives are identified and seek approval before incurring costs.

Chapter 2

The Department's Mismanagement of the Contract with the Primary STARS Vendor Led to Cost Increases and Delays

Figure 1



For the reasons discussed in Chapter 1, the Project Management Team was able to make decisions that were not in the best interest of the State in the administration of the contract with the primary STARS vendor. These decisions, which included compensating the vendor \$501,066 for Department delays misrepresented as deliverables, ultimately led to the project's current situation, as also discussed in Chapter 1.

This audit covered three of the four phases of contract administration (see Figure 1), and we identified issues in all three areas audited: payment/reimbursement methodology, contract establishment, and contractor monitoring.

The Department Paid the Vendor \$501,066 for Misrepresented Deliverables

To compensate the vendor for delays the Project Management Team caused (see Chapter 2-B), the team and the vendor agreed that delays should be billed as work plan deliverables. We identified three payments totaling \$501,066 that the vendor billed as “work plans” that in fact were delay claims. The contract did not allow for payments for delays; therefore, the Project Management Team could not legitimately compensate the vendor for project team delays. The Project Sponsor used redefinition letters (see text box) to delete subsequent phase deliverables and use the funds to pay for these delay claims.

What Are Redefinition Letters?

Redefinition letters were the tools used to document the Department’s Executive Sponsor’s and vendor’s written approval of redefinitions of deliverables and payment milestones.

The vendor submitted an additional invoice for a \$350,783 work plan in June 2003 (see Chapter 2-B). As of January 2004, the Department had not paid the invoice pending sufficient documentation from the vendor.

Evidence showed that this amount was a contingency fund that DIR recommended including in the contract as a work plan deliverable.

The federal government paid \$400,852 of the \$501,066 cost for these delays misrepresented as deliverables. As a result, there is a risk that the Federal Highway Administration or federal auditors could question these costs and ask the Department for reimbursement. We briefed the Federal Highway Administration about this issue, and we are sending it a copy of this report.

Recommendation

The Department should enforce the agreed-upon payment methodology. If the need arises to change a future contract’s provisions, the Department should amend the contract after getting appropriate approvals to do so rather than disregarding the provisions.

Management’s Response

The Department concurs that the agreed-upon payment methodology should be enforced. Redefinition letters of project deliverables should not have been used in lieu of a contract amendment to settle contract claims. All project changes will be documented and will follow the change control process that is included as part of the project contract. Changes requiring a contract amendment will also follow the change control process, which requires approval from the appropriate management levels from both the sponsoring office and the Department’s Information Systems Division. For the STARS project, all contract administration functions will be segregated under a contract administrator within the Administration Section of the Division. The contract administrator will track and monitor contractual compliance and when appropriate, seek counsel from its Office of General Counsel, Contract Services Section to assure contractual procedures are in the Department’s best interest.

A Contract Provision and Amendments Contributed to Delays and Misuse of Funds

The contract did not establish a realistic timeframe for reviewing the vendor's deliverables. Additionally, amendments to the contract renamed, deleted, added, combined, and divided deliverables, making it difficult to account for changes to the project's deliverables.

The Project Management Team did not establish a realistic timeframe for reviewing the vendor's deliverables. When the Project Management Team established the contract, it agreed to review the vendor's deliverables in seven working days. However, the Project Management Team did not consider the work schedules of the employees who would have to perform the reviews or the complexity of the deliverables.

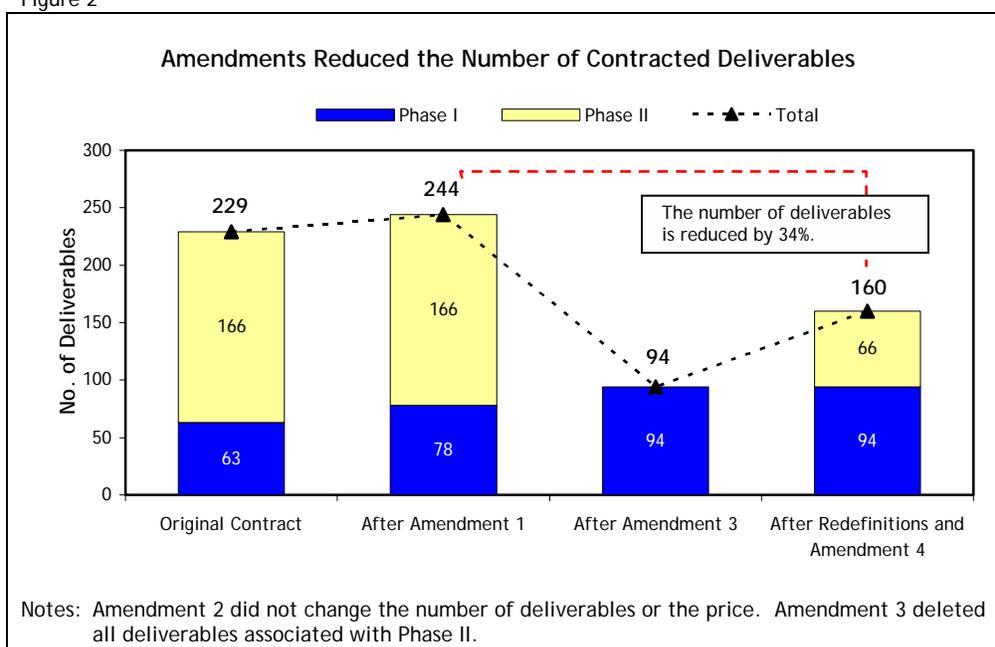
Because the contract was strictly a deliverables-based contract, it did not contain provisions for compensating the vendor for delays. Consequently, when the Project Management Team exceeded its review time, payments to the vendor for these deliverables were delayed. The vendor threatened to quit the project in December 2000, and the project was put on hold for six months while the vendor and the Department renegotiated the contract. As discussed in Chapter 2-A, we identified \$501,066 in delay claims that were misrepresented as work plans.

A contract amendment provided one person the opportunity to change deliverables without management's approval and took funds associated with deliverables from a subsequent phase of the project to compensate the vendor for delays. As a result of the renegotiation discussed above, an amendment was executed in December 2000 allowing the Executive Project Sponsor and vendor to change deliverables through written agreements (redefinition letters) rather than contract amendments as long as the change did not affect the overall contract amount.

The redefinition letters gave the Project Sponsor the opportunity to inappropriately assume the Executive Project Sponsor's authority to approve redefinition letters on behalf of the Department. (See Chapter 1 for a discussion of this person's conflicting roles and responsibilities.) This individual used redefinition letters to delete future deliverables so that funds would be available to compensate the vendor for delays without increasing the overall contract cost.

Subsequent amendments deleted 100 deliverables associated with Phase II of the project. The associated funds were used to pay for additional Phase I deliverables. The deletion of these deliverables reduced the number of total project deliverables by 34 percent (see Figure 2).

Figure 2



Source: Contract with the primary STARS vendor and amendments to that contract.

An amendment contained a contingency fund that was called a work plan. The Project Management Team took DIR’s advice to create a contingency fund with \$350,783 that was available after the deletion of some deliverables. DIR recommended using the money to create a contingency fund and calling it a work plan. (See Chapter 3 for more information about the Department’s contracts with DIR.) By creating a contingency fund, the Project Management Team disregarded guidance from the Department’s Contract Services Office.

This “work plan” contributed to the Department’s and the vendor’s terminating their contract. In June 2003, the vendor submitted an invoice for this work plan. As a result of our audit, the Department had not paid the invoice as of January 2004, pending sufficient documentation of the work the vendor performed.

Recommendations

The Department should:

- Consider all the reviews that need to occur when establishing timeframes for the review of deliverables.
- Ensure that amendments are consistent with guidance from its legal counsel.
- Ensure that all changes to a project’s deliverables are approved by subject matter experts and project management.

DIR should indicate in its contracts with other agencies that DIR does not provide legal counsel, and it should require that the agencies have their own legal counsels review contracts and amendments.

Department Management's Response

The Department concurs:

- *The Department will consider all the reviews that need to occur when establishing timeframes for the review of deliverables. Deliverables will be packaged in tangible products, allowing for necessary review by appropriate Department personnel, which includes staff from the Department's Information Systems Division. In addition, the Department will ensure the appropriate subject matter experts assigned to perform that function are provided a realistic timeframe to review the vendor's deliverables for acceptance.*
- *As needed, the Department will follow guidance from its Office of General Counsel Contract Services Office to ensure proper contractual amendments.*
- *The Department will ensure that all changes to project deliverables are approved by subject matter experts and the appropriate level of management.*

DIR Management's Response

The Department of Information Resources (DIR) management agrees with the recommendation made by the State Auditor's Office. DIR's contract managers and legal staff have been instructed to notify all clients, as we work with them, that they should consult with and obtain the advice/approval of their respective organization's management and legal staff. In addition, our contracts will be modified to clearly state that any advice provided by DIR's staff to the client agency is informational only and not intended to replace the review and/or approval of their appropriate management and/or legal staff.

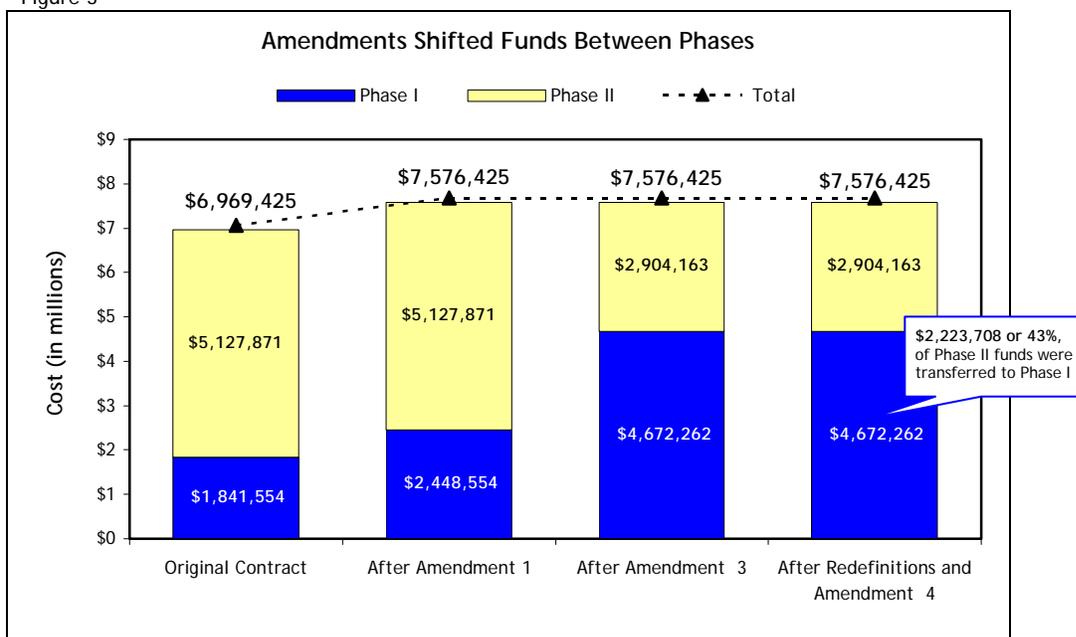
Chapter 2-C: Contractor Monitoring

Poor Contractor Oversight Led to Delays and Cost Increases

As mentioned in Chapter 2-B, the Project Management Team exceeded the review timeframe established in the contract when reviewing Phase I deliverables. The contract terms allowed the Project Management Team a total of 403 review days, but the Project Management Team took almost twice that amount of time and missed all key milestones.

These delays also affected the price of Phase I, which increased by \$2.8 million to compensate the vendor for delays and for the additional work that was added when the vendor and the Department renegotiated the contract (see Figure 3). Additionally, the Department failed to qualify for a \$195,000 savings the vendor offered as an incentive for the Department to review deliverables in a timely manner.

Figure 3



Source: Master contract with the primary STARS vendor, amendments to that contract, and redefinition letters.

In addition, the Project Management Team circumvented the change control procedures in the contract by not involving the Project Board in reviewing changes to deliverables.

The change control procedures required the Project Board to review the requests for changes to the deliverables and to approve the final changes. However, the Project Board did not have the opportunity or the information necessary to perform its responsibilities to ensure the project was completed on time, within budget, or with the intended functionality. The Department employee with several management roles approved changes to deliverables; however, there is no documentation that this person was acting as the Project Board Chair when approving changes.

Furthermore, the Department did not consistently follow its procedures when processing payments to the contractor. Of the \$5,852,679 total dollar population tested, \$1,445,233 (38 invoices out of 68) was not approved by the Project Board. The STARS Project Board is responsible for approving project invoices.

The STARS Project Manager approved 7 of these 38 invoices but did not have authority to perform this task. The division that processes payments did not recognize that the invoices were signed by an unauthorized person.

Recommendations

The Department should:

- Take advantage of financial incentives, such as those for completing reviews in a timely manner.

- Follow contractually established change control procedures.
- Ensure that those who process payments are aware of authorized individuals and enforce proper payment authorization.

Management's Response

The Department concurs:

- *The Department will make every effort to capitalize on financial incentives, such as those for completing reviews in a timely manner.*
- *The Department will ensure that contractually established change control procedures are followed through the full involvement and approval of the appropriate personnel outlined in the change control document.*
- *The Department will ensure that all staff involved with the processing of payments is made aware of the individuals authorized to approve such payments. For the STARS project, all contract administration functions will be segregated under a contract administrator within the Administration Section of the Division to ensure payments are made in a timely manner and that the appropriate approval signature has been obtained.*

Chapter 3

The Department Also Did Not Follow Sound Contracting Practices When Contracting with DIR

The Department did not ensure that its contracts with DIR related to STARS were in the Department's best interests. These contracts are in addition to the Department's contract with the primary STARS vendor discussed in Chapter 2:

- The Department contracted with DIR for assistance in procuring a primary vendor, establishing the contract with the primary vendor, and resolving conflicts with the primary vendor.
- The Department contracted with DIR for assistance in procuring a data conversion vendor. DIR contracted directly with the data conversion vendor on behalf of the Department.

We identified issues in all three of the audited areas of contract administration.

Contractor Oversight. The Project Management Team did not exercise due diligence in ensuring that DIR's advice regarding the STARS project was in the best interest of the Department. As discussed in Chapter 2-B, the Department took DIR's advice regarding an amendment to the contract with the primary STARS vendor. DIR's advice to create a contingency fund with \$350,783 in available dollars and call it a work plan deliverable contradicted guidance from the Department's Contract Services Office.

Payment/Reimbursement Methodology. The fee-based payment methodology for DIR's contracts created a conflict of interest for DIR. Rather than being paid according to the value of the services it provided, DIR was paid 2.5 percent of each payment that the Department made to its primary vendor and its data conversion vendor. This payment methodology reduced DIR's incentive to help the Department achieve the best value. DIR was paid \$12,526 for the \$501,066 in misrepresented deliverables discussed in Chapter 2-A. It also stood to be paid \$8,770 for the \$350,783 contingency fund that it recommended to the Department.

Between February 2000 and April 2003, the Department paid DIR a total of \$133,000 based on payments to the primary vendor. In July 2003, the Department terminated its arrangement with DIR after determining that it no longer needed DIR's services, which primarily consisted of procuring a STARS vendor and establishing the contract. DIR's fee for the administration of the data conversion vendor was approximately \$5,300 (or 2.5 percent of \$214,877). It is unclear what services DIR provided for these payments.

Contract Establishment. The Department did not ensure that the contract with the data conversion vendor clearly identified the services to be provided. When DIR contracted with the data conversion vendor, it wrote the contract for primarily project management services. The vendor provided the needed data conversion services but did not provide any project management services. Additionally, the vague description of work created a risk that DIR and the Department would not be able to hold the vendor accountable for data conversion services.

Recommendations

The Department should:

- Exercise due diligence when evaluating advice and services from vendors to ensure that the State's interests are protected.
- Consider entering into contracts with DIR specifying a per-service fee instead of a fee based on a percentage of vendors' costs.
- Ensure that the scope of work to be performed by vendors accurately describes expected services and products.

Management's Response

The Department concurs:

- *On contractual matters, the Department will seek advice from its Office of General Counsel, Contract Services Section to ensure the State's and the Department's best interests are protected. On technical matters relating to the management of information technology projects, the Department will rely on the expertise of its Information Systems Division project manager to assure proper vendor oversight.*

- *If the Department enters into any future contracts with DIR, we will insist that the fee structure is based on specific tasks/deliverables and not a percentage of contract payments.*
- *The Department will ensure that the scope of work to be performed by vendors accurately and clearly describes services and products they are providing. The scope should identify specific tasks and deliverables and the dollar amount to provide each task and deliverable. All future contract documents will be reviewed by business analysts and subject matter experts familiar with the work to be performed and when necessary by the Department's Office of General Counsel, Contract Services Section prior to execution.*

Appendices

Appendix 1

Objectives, Scope, and Methodology

Objectives

The objectives of this audit were as follows:

- Are major information project controls adequate to ensure that the project will be delivered on schedule, on budget, and with the desired level of user functionality upon implementation?
- Does project management have adequate and complete project planning documents, an adequate plan to address potential risks, and an adequate process to manage changes to the project?
- Is the status of the project adequately tracked so management can determine whether progress is acceptable given the amount of time and funds already spent?
- Are the actual costs incurred and projected cost estimates adequately supported?
- Does the administration of contracted services ensure appropriate use of state funds?

Scope

The scope of this audit was limited to the review of the Department of Transportation's (Department) administration of the contracts related to the Statewide Traffic Analysis and Reporting System (STARS) for the period of October 1999 through January 2004. Our audit included a review of the contracts, a determination of the accuracy of the expenditures, and an assessment of the effectiveness of the Department's management of the project. We did not audit the information systems' general controls.

While we did not audit the STARS functionality, we did evaluate the project controls to determine whether they were adequate to ensure that the project would be delivered on time, within budget, and with the intended level of functionality. Our audit of controls focused on three of the four phases of contract administration: contract establishment, payment methodology, and contractor monitoring. We did not audit the contract procurement phase.

Statute requires the State Auditor's Office to participate on the Quality Assurance Team (QAT), which approves and monitors major information resource projects. Our involvement in the QAT could potentially affect our independence in the reporting of results related to the IT project we audited. However, we proceeded with this audit due to the risk associated with this IT project. We conducted this audit in accordance with generally accepted government auditing standards with the exception of this potential effect on our independence. Our involvement in the QAT did not affect our audit conclusions.

Methodology

The audit methodology consisted of gaining an understanding of the Department's management of the STARS project. We reviewed the provisions in the contract with the primary contractor, project expenditures, financial reports, project deliverables, and tools used to monitor the project. We covered three of the four phases of contract administration according to the model developed by the State Auditor's Office in the Contract/Grant Administration Training Manual, November 2000.

Information collected to accomplish our objectives included the following:

- Interviews with staff from the Department, the Department of Information Resources (DIR), the Legislative Budget Board, and the QAT
- Documentary evidence such as Quality Assurance Monitoring Reports, Uniform Statewide Accounting System expenditure data, Federal Highway Administration State Planning and Research reports, STARS contracts and amendments, and documentation on the acceptance of deliverables
- Project monitoring tools

Procedures, tests, and analyses performed included the following:

- Reviewed contracts and all amendments to determine whether they contained sufficient provisions for holding the contractors accountable for performance
- Determined the impact of revisions (amendments) to costs, timeframes, and deliverables, including functionality
- Reviewed the Department's STARS-related expenditures, including vendor invoices
- Reviewed the Department's action plans for cost, time, and scope variances

Other Information

We conducted fieldwork from August 2003 to January 2004. The audit was conducted in accordance with generally accepted government auditing standards. The following members of the State Auditor's staff performed the audit:

- Adriana Buford, CPA, CISA, CIA, (Project Manager)
- Lucien Hughes (Assistant Project Manager)
- Rodney Almaraz, CISA, CIA
- Donna Hopson, CPA
- Jose Saucedo, CISA, CPA
- Sherry Sewell, CGAP
- J. Scott Killingsworth, CIA (Quality Control Reviewer)
- Sandra Vice, CIA, CGAP (Audit Manager)
- Frank N. Vito, CPA (Audit Director)

Management's Response



April 16, 2004

Adriana Buford, CPA, CISA, CIA
Project Manager
State Auditor's Office
P. O. Box 12067
Austin, Texas 78711-2067

Dear Ms. Buford:

As requested, we have submitted an electronic response and have attached our printed response to the audit report on the Statewide Traffic Analysis and Reporting System (STARS). In summary, we are in agreement with the audit report. The audit has had a significant, positive impact on the STARS project. Several specific measures will be taken on the STARS project to improve management oversight and contractual compliance.

We appreciate your efforts and contributions to improving the STARS project and enhancing our department's project oversight procedures. If you have any questions, please contact me at (512) 305-9501 or Owen Whitworth at 463-8637.

Sincerely,

Michael W. Behrens, P.E.
Executive Director

cc: Owen Whitworth, Audit Office, TxDOT

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Mr. Michael W. Behrens, P.E., Executive Director

Department of Information Resources

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