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An Audit Report on

# **A Construction Contract at the Department of Transportation**

June 2015

Report No. 15-033

# A Construction Contract at the Department of Transportation

## Overall Conclusion

The Department of Transportation (Department) generally planned, procured, and formed the construction contract audited in accordance with applicable statutes, rules, and Department policies and procedures that helped to ensure that the State's interests were protected (see text box for details on the contract audited). However, the Department should strengthen its current processes by:

- Retaining all contract planning documentation.
- Including a provision in each construction contract that establishes the Department's and the State Auditor's rights to audit the contract.

In addition, the Department performed oversight activities of the contract audited to ensure that the contractor performed and complied in accordance with the requirements of the contract. However, it should improve documentation of its monitoring efforts in the areas of (1) payment processing, (2) quality assurance testing, and (3) change orders.

Auditors communicated other, less significant issues related to contract documentation separately in writing to the Department.

Auditors also followed up on the implementation status of four selected recommendations related to information technology that the State Auditor's Office previously made in *An Audit Report on Selected Contracts at the Department of Transportation* (State Auditor's Office Report No. 13-044, July 2013). See Appendix 2 for additional information on the implementation status of those recommendations.

### Construction Contract Audited

The construction contract audited was between the Department of Transportation and Williams Brothers Construction Co., Inc., and its purpose was to reconstruct and widen Interstate Highway 35 in McLennan County (in the Department's Waco District).

The Department awarded the contract in July 2010. The contract was signed on August 24, 2010, and the initial total contract value was \$166.8 million. As of November 2014:

- The Department had paid the contractor \$159.4 million.
- The adjusted contract value after change orders was \$171.9 million.
- The Department reported that the project was 91.8 percent complete.

The Department made payments on the contract audited primarily with state funds.

Source: Department of Transportation.

### Contract Management Phases

- Planning - Identify contracting objectives and contracting strategy.
- Procurement - Fairly and objectively select the most qualified contractor(s).
- Contract Formation/Rate/Price Establishment - Ensure that the contract contains provisions that hold the contractor(s) accountable for producing desired results, and establish processes that are cost-effective and aligned with the cost of providing goods and services.
- Contract Oversight - Monitor and enforce the terms of the contract.

Source: *State of Texas Contract Management Guide*, version 1.7.

## ***Summary of Management's Response***

The Department agreed with the recommendations in this report.

## ***Summary of Objective, Scope, and Methodology***

The objective of this audit was to determine whether state entities have administered certain contract management functions for selected contracts in accordance with applicable requirements.

The scope of this audit covered the Department's contracting process—contract planning, contract procurement, contract formation, and contract oversight—related to the highway construction contract with Williams Brothers Construction Co., Inc., which the Department awarded in July 2010.

The audit methodology included collecting and reviewing the Department's planning and procurement documentation; reviewing and testing the Department's contract payments; reviewing the Department's contract monitoring processes and documentation; reviewing contract requirements and related deliverables; conducting interviews with Department management and staff; reviewing statutes, rules, and Department policies and procedures; and performing selected tests and other procedures for the contract audited.

To assess data reliability, auditors relied on previous State Auditor's Office audit work on the Uniform Statewide Accounting System (USAS) that evaluated USAS application and general controls to determine that data was sufficiently reliable for the purposes of this audit. Auditors also relied on previous State Auditor's Office audit work on the Department's construction tracking system to determine that data related to construction activity and contractor payments was sufficiently reliable for the purposes of this audit. Auditors relied on previous State Auditor's Office audit work on the Department's mainframe system, including general controls, to determine that data from the Design Construction Information System, which is located on the mainframe, was sufficiently reliable for the purposes of this audit. In addition, auditors relied on the Department's third-party vendor's external auditor's American Institute of Certified Public Accountants' Statement on Standards for Attestation Engagements No. 16 report on the Electronic Bidding System to determine that data related to the bid process was sufficiently reliable for the purposes of this audit.

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# Detailed Results

## Chapter 1

### **The Department Generally Planned, Procured, and Formed the Contract Audited in Accordance with Applicable Statutes, Rules, Policies, and Procedures**

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The Department of Transportation (Department) had a documented, standardized contracting process, and it performed and documented certain planning activities—such as developing cost estimates and identifying potential sources of funding—for the construction contract audited, as required. The Department also awarded the contract to the lowest bidder, as required. However, the Department should ensure that it maintains a complete record of all procurement documentation during the term of a contract.

In addition, the Department developed the contract in accordance with applicable statutes. The Department included the contract provisions required by its policies and procedures in the construction contract audited. Although the Department is exempt from a requirement to comply with the *State of Texas Contract Management Guide*, the contract audited also included most of the essential contract clauses that guide requires. However, the contract audited did not include a provision establishing the Department's and the State Auditor's rights to audit the contract.

#### Chapter 1-A

### **The Department Planned for the Contract in Accordance with Applicable Requirements; However, It Should Improve Documentation of Certain Planning Activities and Perform Site Visits When Required**

**The Department complied with certain contract planning requirements.**

The Department had a documented, standardized contracting process, and it performed and documented certain planning activities in accordance with that process. Specifically, the Department:

- Identified risks and needs associated with the contract during contract planning, considered the contract in its agencywide planning, and identified the scope of the contract during planning.

- Documented the planning activities it performed, as required by its *Environmental Manual*. The Department's planning included preparing an environmental assessment (see text box for more information on environmental assessments).
- Documented construction cost estimates and identified potential funding sources for the construction project.

**The Department should maintain certain planning documents during the entire term of a construction contract.**

**Environmental Assessments**

The Department requires an environmental assessment for a project for which the significance of impacts is not known. Occasionally, the Department prepares an environmental assessment for a project that results in a finding of significant social, economic, and environmental impacts. The environmental assessment is useful as an early planning document, but it usually requires additional time to document.

Source: The Department's *Project Development Process Manual*, July 2014.

While the Department maintained documentation of certain planning activities for the contract audited, it did not retain documentation to demonstrate that it performed the following planning activities in the order required by its *Project Development Process Manual*:

- Completion of preliminary engineering.
- Environmental studies.
- Right-of-way acquisitions and plans.
- Specifications.
- Cost estimates.
- Stakeholder meetings.

**For planning purposes, the Department should perform a site visit of a planned construction location, as required.**

During the planning process, the Department did not perform a site visit at the physical location on which construction was to be performed. According to the Department's *Project Development Process Manual*, site visits should be performed during planning to properly assess project needs, and the Department should perform subsequent site visits to adequately design a project.

## Recommendations

The Department should:

- Retain all contract planning documentation for the term of each contract.
- Perform site visits in accordance with its *Project Development Process Manual*.

## Management's Response

*The Design Division (DES) agrees with the recommendation and will make updates to the Project Development Process Manual to reflect the Department's record retention policy requirements for the Department to retain documentation for the listed items—completion of preliminary engineering, environmental studies, right-of-way acquisitions and plans, specifications, cost estimates, and stakeholder meetings—for the term of a contract.*

*Responsible party: Director, Design Division*

*Implementation date: December 2015*

*Although the Waco District believes site visits were performed as part of project development for this project, we agree there is no way to capture that this was done. The Waco District will work with DES to include a section in the Design Summary Report (DSR) that will identify the individuals that performed site visits and the dates they were performed.*

*Responsible party: Director of TP&D, Waco District (WAC)*

*Implementation date: August 1, 2015*

Chapter 1-B

## **The Department Generally Procured the Contract in Accordance with Applicable Requirements; However, It Should Retain a Complete Record of Certain Documents**

**The Department awarded the contract to the lowest bidder, as required.**

Title 43, Texas Administrative Code, Section 9.17 (b), requires the Texas Transportation Commission to award contracts to the lowest bidder. The Department received 7 bids from 10 vendors. Two of those bids were joint bids involving multiple vendors. The Department awarded the contract to William Brothers Construction Co., Inc., which submitted a bid of approximately \$166.8 million, and that bid was the lowest bid the Department

received. Table 1 lists the bids that the Department received. At the time of the procurement, the Department estimated that the project cost would be approximately \$182.4 million.

Table 1

Bids the Department Received for the Contract Audited <sup>a</sup>	
Vendor	Bid
Williams Brothers Construction Co., Inc.	\$166,787,860
W.W. Webber, LLC	\$176,414,323
Texas Sterling Construction Company	\$182,626,109
Sema Construction, Inc. and James Construction Group, LLC	\$190,669,885
Austin Bridge & Road, LP	\$191,304,136
Balfour Beatty Infrastructure; T. J. Lambrecht Construction, Inc.; and Big Creek Construction, Ltd.	\$194,984,957
J.D. Abrams, LP	\$202,445,044

<sup>a</sup> A total of 10 vendors submitted 7 bids. Two bids were joint bids: A team of two vendors submitted one bid, and a team of three vendors submitted one bid.

Source: The Department.

**The Department processed the bids it received in accordance with its requirements.**

Auditors tested 6 (86 percent) of the 7 bids the Department received. For those six bids, the Department complied with Title 43, Texas Administrative Code, Chapter 9, which prescribes the requirements governing bid qualifications and the bidding process. Specifically, the Department ensured that:

- Vendors submitted the bids in the correct format and with required bond documents.
- The bids included complete information on the unit price for each item and material under bid.

**The Department should retain documentation of all bids.**

The Department did not retain documentation for 1 (14 percent) of the 7 bids it received. That bid was in hard-copy form. The Department complied with its record retention policy, which specified that an unsuccessful bid should be disposed of three years after the fiscal year in which the bid is submitted. However, auditors could not verify whether the Department reviewed that bid in compliance with applicable procurement requirements.

For the other six bids:

- Vendors submitted five bids electronically, and the Department retained those bids in its bid tracking system.



- One bid was in hard-copy form, and the Department retained that bid because it was the bid of the vendor to which the Department awarded the contract.

**The Department should retain a complete record of vendors' confidential questionnaires to support that vendors met qualification requirements.**

The Department did not retain a complete record of the confidential questionnaires for 6 (60 percent) of the 10 vendors that submitted bids—including the vendor to which it awarded the contract—to support that those vendors were eligible to bid for the contract. A confidential questionnaire provides detailed financial information about a vendor, the vendor's organizational structure, and the vendor's management and staff.

For the six vendors for which the Department had incomplete confidential questionnaires, the confidential questionnaires did not include required information such as affidavits, supplemental information on the financial condition of the vendor, and information on the vendor's experience. Title 43, Texas Administrative Code, Section 9.12, specifies that, to be eligible to bid on Department contracts, vendors must satisfy certain prequalification requirements, including the completion and submission of a confidential questionnaire.

### **Recommendation**

The Department should retain a complete record of all bids and confidential questionnaires that it receives from vendors.

### **Management's Response**

*The Construction Division (CST) agrees with the recommendation and will be coordinating revision of the records retention schedule to require that unsuccessful bids and all letting files be retained for 7 years after fiscal year end to ensure that the documentation is accessible through project acceptance. In addition, CST is entering into a contract with a third-party vendor to automate the prequalification process, which will improve our records management system and ensure that we are compliant with the records retention policy.*

*Responsible party: Director, Construction Section, CST*

*Implementation date: November 2015*

## The Department Formed the Contract in Accordance with Applicable Statutes, Rules, Policies, and Procedures; However, It Should Establish Audit Rights in Its Contracts

The Department complied with applicable requirements for developing the contract.

The Department properly reviewed and approved the contract and reported the contract to the Legislative Budget Board. In addition, the Department ensured that the final contract amount was reasonable. Specifically:

- Department staff reviewed the contract provisions concerning construction plans, specifications, and estimates to help ensure that all statutorily required items were present. The Department prepared a letter of authority that documented its review and its use of standard specifications (and preapproved contract items), which help to ensure compliance with statutory and Department requirements and address legal risks.
- The Texas Transportation Commission reviewed and approved the contract, as required. The members of the Texas Transportation Commission approved the contract award on July 29, 2010. The Department's director of construction signed the contract on August 24, 2010. Title 43, Texas Administrative Code, Section 9.17(b), requires the Texas Transportation Commission to award highway construction contracts to the lowest bidder.
- The Department reported the contract to the Legislative Budget Board, as required. Texas Government Code, Section 322.020, requires a state agency to provide documentation on each major contract to the Legislative Budget Board. That statute defines a major contract as a contract that (1) does not require written notice as required under Texas Government Code, Section 322.020(1); (2) is not a purchase order, an interagency contract, or a contract that is not funded by state appropriations; and (3) has a value that exceeds \$50,000.
- Prices for construction-related materials specified in the contract were reasonable. Using professional judgment, auditors selected three other Department highway construction contracts that were comparable to the audited contract based on the locations, letting dates, and amounts of the contracts.

### Major Item

A major item is a material, product, or service included in a contract that has a total cost equal to or more than 5 percent of the original contract amount or \$100,000, whichever is less.

Source: The Department.

Based on professional judgment, auditors then selected four major items to compare with the contract audited. Those major items were two types of concrete, mobilization work, and excavation work (see text box for more information on major items). Auditors compared the prices for the four major items in the three contracts selected with the contract audited and determined that the prices specified in the contract audited were reasonable when compared to the three other comparable contracts.

**The Department should include the State’s right to audit in its contracts.**

While the contract included the provisions required by the Department’s policies and procedures, including most of the essential contract clauses specified in the *State of Texas Contract Management Guide*<sup>1</sup>, it did not include a provision that established the Department’s and the State Auditor’s rights to audit the contract. The *State of Texas Contract Management Guide* provides a framework for public contracting practices that can help protect the State’s and taxpayers’ interests. The Department did not have a policy that required its construction contracts to include a right-to-audit provision.

**Title 43,  
Texas Administrative Code,  
Section 9.327**

(a) A contractor shall retain all records specified in the contract for three years after the later of:

- (1) the date that the final payment is made under the contract; or
- (2) the latest date of completion of any investigation, audit, examination, or other review that began during the period of the contract or within three years of the date described by paragraph (1) of this subsection.

(b) The contractor shall make the records available to representatives of the department and other interested state agency representatives for inspection, audit, examination, investigation, or other review at all reasonable times during the retention period.

Title 43, Texas Administrative Code, Section 9.56(f), which was in effect when the Department let the contract, provided the authority for the Department to audit a contractor. Specifically, that rule required a contractor with a highway construction contract funded entirely with state and local funds to make its records available to the Department and other interested state agencies for inspection, audit, examination, investigation, or review during the Department’s defined record retention period. However, the Department did not include a provision describing that rule in the contract. In 2012, the Department repealed that rule and established a similar rule in Title 43, Texas Administrative Code, Section 9.327 (see text box).

Establishing the State’s right to audit within a contract is critical to ensuring that the Department and other state oversight entities have (1) the ability to audit a contractor’s construction work and costs and (2) access to all information necessary to verify that a contractor has complied with the terms of its contract.

**Recommendation**

The Department should require its construction contracts to include a provision that establishes audit rights for the Department and the State Auditor, including access rights to all contractor records related to the contract.

**Management’s Response**

*CST will author a Special Provision to include the specified language in all state-let construction and maintenance contracts.*

*Responsible party: Director, Construction Section, CST*

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<sup>1</sup> Texas Government Code, Section 2262.002, specifies that the statutory requirement for statewide contract management, which includes the Comptroller of Public Accounts’ *State of Texas Contract Management Guide*, does not apply to Department contracts that relate to highway construction or highway engineering.

*Implementation date: August 2015*

## ***The Department Made Payments to the Contractor and Monitored the Contractor in Accordance with Applicable Requirements; However, It Should Strengthen Certain Elements of Its Contract Oversight***

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The Department made payments and monitored the construction contract audited in accordance with its contract oversight policies and procedures. Specifically, for the period audited (October 2010 to November 2014), the Department generally reviewed and approved its monthly payments to the contractor, performed required quality assurance tests, properly approved and executed contract change orders, and ensured that the contractor complied with subcontracting requirements. However, the Department did not consistently maintain complete documentation of its contract oversight activities.

In addition, the Department should define and document the requirements for project engineers that function in the role of contract managers for its construction contracts.

### Chapter 2-A

#### **The Department Generally Reviewed and Approved Invoices that Supported Payments to the Contractor**

Auditors reviewed all 51 monthly payments to the contractor for construction work performed from October 2010 to November 2014. Those payments totaled approximately \$159.4 million. Auditors determined that the Department properly reviewed and approved all 51 of those payments.

The Department also accurately calculated and maintained daily work reports supporting payments made for 27 major items tested (see text box for more information on daily work reports). The major items were part of the 51 monthly payments discussed above. Payments for those 27 major items totaled \$91.1 million.

**The Department should consistently maintain documentation to support the accuracy of payments for materials on hand.**

Auditors also reviewed 10 (20 percent) of the 51 payments discussed above to determine whether quantities and charges for 20 materials on hand items were supported by documentation (see text box for more information on materials on hand). According to the Department, the value of those 20 materials on hand items totaled approximately \$5.7 million. For 4 (20 percent) of the 20 items tested, auditors

#### **Key Terms Related to Contractor Payments**

**Daily Work Reports** - Daily work reports are daily project diaries that contain critical project information such as work in progress, location of work, and quantities of work.

**Payments for (construction) materials on hand** - According to the Department, the Department should sample materials for testing at the locations and frequencies shown in a guide schedule. It should also establish locations to receive the samples when there are no established sites and determine whether stockpiled materials are acceptable prior to making payments for materials on hand.

Source: The Department's *Construction Contract Administration Manual*.

identified \$780,928 in overpayments. For those 4 items (which had a total value of \$1.5 million), the Department did not have documentation to support additional charges it paid to the contractor. Specifically:

- For 3 items tested (which had a total value of approximately \$1.5 million), the Department did not have documentation to support additional charges it paid the contractor that totaled \$765,157. The Department asserted that the additional charges were related to freight costs for base material, limestone, and concrete sand.
- For 1 payment tested, the Department did not have documentation to support that the contractor's calculated cost of \$15,771 for rebar material was accurate.

### **Recommendation**

The Department should consistently maintain complete documentation supporting the accuracy and completeness of the amounts it pays to contractors for materials on hand.

### **Management's Response**

*The Waco District will ensure its construction records auditors verify through interim project audits that accurate and complete documentation is maintained to support the material on hand payment. Interim audits are generally performed at intervals when the project reaches 25, 60, and 90 percent complete.*

*Responsible party: Director of Construction, WAC*

*Implementation date: May 2015*

## **The Department Performed Required Quality Assurance Tests for the Contract; However, It Should Improve Its Documentation of Quality Assurance Test Results in Its Construction Tracking System**

**The Department performed quality assurance tests, as required.**

For the contract audited, auditors reviewed quality assurance test records from the Department's construction tracking system from October 2010 to November 2014 for 22 (20 percent) of 111 selected major item materials (materials) the Department purchased. (See text box for more information on the construction tracking system.) Auditors determined that the Department performed the quality assurance tests that were required for those selected materials. (See text box for more information on quality assurance tests.)

**The Department should consistently document certain testing information in its construction tracking system.**

Auditors identified certain weaknesses in the Department's process for recording the results of quality assurance tests in its construction tracking system. Specifically:

- For 12 (55 percent) of 22 materials tested, the Department did not consistently record the name of the tester. As a result, auditors could not verify whether (1) the tester was qualified to conduct the quality assurance test or (2) the tester differed from the individual who reviewed and approved the test.
- For 5 (23 percent) of 22 materials tested, the construction tracking system identified the tester, reviewer, or authorizer as the same individual. Not segregating duties for testing, reviewing, and authorization responsibilities increases the risk that the Department may not detect deficiencies that could affect safety and project costs.

Auditors conducted further testing for a subset of 16 of the 22 materials tested and discussed above. For 3 (19 percent) of those 16 materials tested, auditors identified errors related to the documentation of the test requirements and test results in the construction tracking system. Specifically:

- For one sample item, the Department did not update the required test to reflect a change it made to the testing approach.

### **Construction Tracking System**

The Department uses its construction tracking system to track construction contracts and track contractor payment amounts. That system includes information such as the time the contractors and subcontractors work, number of employees, equipment used to perform work, weather conditions, unusual occurrences, inspection activities, testing results, data related to bid items (such as measurements and payment), and descriptions of items for which the Department is paying.

Source: The Department.

### **Quality Assurance Testing**

The Department established a quality assurance program to ensure that materials and workmanship incorporated into any highway construction project are in reasonable conformity with the requirements of the approved plans and specifications, including any approved changes. The program allows for the use of validated, contractor-performed quality control test results as part of an acceptance decision.

Source: The Department.

- For one sample item, the number of tests required was not consistent with the number of tests required by the construction tracking system.
- For one sample item, the Department did not document the test correctly in its construction tracking system.

The State Auditor's Office previously identified issues at the Department regarding (1) recording the names of testers and (2) segregating the duties for testing and reviewing quality assurance tests in *An Audit Report on Selected Contracts at the Department of Transportation* (State Auditor's Office Report No. 13-044, July 2013). See Appendix 2 for more information on the implementation status of selected audit recommendations from that report.

### **Recommendation**

The Department should establish and implement a process to consistently enter complete quality assurance test results—including the tester name, test requirements, and test results—into its construction tracking system.

### **Management's Response**

*The September 13, 2013 SiteManager release included application controls to require documentation of the tester name and segregation of duties for materials QA testing. Exceptions cited for these deficiencies (bullets 1 and 2) pre-dated implementation of this SiteManager release.*

*Districts will implement recordkeeping procedures to (1) address and correct testing deficiencies that are flagged in SiteManager or (2) provide reasons for overriding deficiencies that are flagged in SiteManager.*

*Responsible party: Director, Construction Section, CST*

*Implementation date: N/A*

*The Waco District will ensure District Laboratory and construction records auditors review project tests through interim project audits to verify complete and accurate information is provided. Interim audits are generally performed at intervals when the project reaches 25, 60, and 90 percent complete.*

*Responsible party: Director of Construction, WAC*

*Implementation date: May 2015*



**The Department Approved and Executed Change Orders, as Required; However, It Should Consistently Document Certain Information That Supports the Approval of Change Orders**

**The Department properly approved and executed change orders to the contract.**

From October 2010 to November 2014, the Department executed 99 change orders for the contract; those change orders totaled approximately \$5.1 million and increased the contract from its initial value of \$166.8 million to \$171.9 million. Auditors tested 26 (26 percent) of the 99 change orders totaling \$998,111 and determined that those 26 change orders contained the appropriate Department approvals. As of November 2014, the Department estimated that the final cost of the contract would be approximately \$173.6 million.<sup>2</sup>

**The change orders were reasonable.**

For all 99 change orders, auditors determined that the change orders neither (1) resulted in a significant increase from the original value of the contract nor (2) led to a change in the contract's scope of work. The 99 change orders added or removed certain construction activities and building materials related to the project.

As of November 2014, the 99 change orders had increased the contract value from the original value of \$166.8 million to approximately \$171.9 million, which represented a 3 percent increase from the original cost.

**The Department should consistently document justification to support each change order.**

Auditors determined that the Department executed 22 (85 percent) of 26 change orders tested in accordance with its *Construction Contract Administration Manual*. Specifically, auditors verified that those 22 change orders included (1) a clear and concise description of the reason for the change order, (2) the bid items involved in the change order, and (3) the appropriate Department approvals.

However, for four change orders tested, the Department did not completely document certain information. Specifically:

- The Department did not document the cost estimates for one change order. Specifically, that change order did not include contractor pricing information. That change order totaled \$66,331.

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<sup>2</sup> The \$173.6 million includes the Department's projected cost of the contract, as well as the change orders executed as of November 2014.

- The Department did not document the physical location where the proposed changes would be performed for one change order. That change order totaled \$27,580.
- The Department did not maintain documentation of the revisions to be made to the original construction plan for two change orders. Those two change orders were for an increased cost of \$28,240 and for a credit of \$29,511.

### **Recommendation**

The Department should ensure that, when applicable, change orders consistently include cost estimates, descriptions of the physical locations where the work is to be performed, and revised construction plans.

### **Management's Response**

*CST will specifically discuss this information—as presented in the Department's Construction Contract Administration Manual, Chapter 7, "Changes to the Contract," and Form 2146, "Change Order Checklist"—with the District Directors of Construction (DOC) at the next DOC meeting.*

*Responsible party: Director, Construction Section, CST*

*Implementation date: August 2015*

*The Waco District will ensure its construction records auditors review all proposed change orders to verify they consistently include cost estimates, description of physical location of proposed work, and when appropriate, include revised construction plan sheets.*

*Responsible party: Director of Construction, WAC*

*Implementation date: May 2015*

Chapter 2-D

### **The Department Should Define and Document the Contract Management Requirements for Project Engineers**

The Department did not have a written policy that defined the contract management requirements for project engineers. A Department area engineer oversees, coordinates, and monitors contractors; however, the area engineer can delegate those responsibilities to a project engineer. For the contract audited, the project engineers functioned as contract managers for construction contracts. The Department asserted that there had been four different project engineers assigned to the contract since the beginning of the

contract. Auditors determined that all of the four project engineers were qualified under the Department's requirements. The Board of Professional Engineers also certified the four project engineers.

Defining the contract management requirements for a project engineer is important because the project engineer could be responsible for ensuring that a contractor complies with all agreed-upon performance and quality standards related to a contract.

### **Recommendation**

The Department should define and document the contract management requirements for project engineers.

### **Management's Response**

*CST will add verbiage to the Construction Contract Administration Manual (CCAM) stating that if the Area Engineer chooses to delegate parts of the day-to-day administration of the contract in accordance with the Department's Delegation of Signature authority, the individual to whom responsibility is delegated must comply with those requirements assigned in the CCAM to the Area Engineer.*

*Responsible party: Director, CST*

*Implementation date: November 2015*

Chapter 2-E

### **The Department Ensured That the Contractor's Requests for Subcontracted Work Met the Department's Requirements**

Auditors reviewed the Department's approval of 23 contractor requests for subcontracting totaling approximately \$51.7 million. The Department's approvals were based on information that the Department's *Construction Contract Administration Manual* required the contractor to include in its subcontracting requests. Specifically, the subcontracting requests included:

- A description of work.
- The geographic area where the subcontracted work was to be done.
- The subcontractor's name, address, and telephone number.
- The subcontractor's federal tax identification number.

- The estimated start and completion dates
- The amount of the subcontract and its percentage of the total contract.
- The disadvantaged business enterprise (DBE) or historically underutilized business (HUB) goal credit, in cases in which a subcontractor was classified as a DBE or a HUB.

As of November 2014, the Department had paid the contractor approximately \$35.2 million for subcontracted work.

In addition, auditors verified that the Department's approvals for subcontracted work complied with a requirement in the Department's *Construction Contract Administration Manual* that the primary contractor perform work that represents at least 30 percent of a contract's total value. The \$51.7 million subcontracting amount discussed above represented approximately 31 percent of the \$166.8 million initial contract value; therefore, the primary contractor is anticipated to perform the remaining 69 percent of the work.

# Appendices

Appendix 1

## **Objective, Scope, and Methodology**

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### **Objective**

The objective of this audit was to determine whether state entities have administered certain contract management functions for selected contracts in accordance with applicable requirements.

### **Scope**

The scope of this audit covered the Department of Transportation's (Department) contracting process—contract planning, contract procurement, contract formation, and contract oversight—related to the highway construction contract with Williams Brothers Construction Co., Inc., which the Department awarded in July 2010.

### **Methodology**

The audit methodology included collecting and reviewing the Department's planning and procurement documentation; reviewing and testing the Department's contract payments; reviewing the Department's contract monitoring processes and documentation; reviewing contract requirements and related deliverables; conducting interviews with Department management and staff; reviewing statutes, rules, and Department policies and procedures; and performing selected tests and other procedures for the contract audited.

The selection methodology for the contract audited was based on the contract dollar amount, type of contract and services, recent audit coverage, and risks identified during the audit planning process.

### **Data Reliability**

Auditors relied on previous State Auditor's Office audit work on the Uniform Statewide Accounting System (USAS) that evaluated USAS application and general controls to determine that data was sufficiently reliable for the purposes of this audit.

Auditors relied on previous State Auditor's Office audit work on the Department's construction tracking system to determine that data related to construction activity and contractor payments was sufficiently reliable for the purposes of this audit.

Auditors relied on previous State Auditor's Office audit work on the Department's mainframe system, including general controls, to determine that

data from the Design Construction Information System, which is located on the mainframe, was sufficiently reliable for the purposes of this audit.

Auditors relied on the Department's third-party vendor's external auditor's American Institute of Certified Public Accountants' Statement on Standards for Attestation Engagements No. 16 report on the Electronic Bidding System to determine that data related to the bid process was sufficiently reliable for the purposes of this audit.

### **Sampling Methodology**

To test compliance with contractor payment requirements, auditors selected a statistical sample of payments primarily through random selection. For those cases, results may be extrapolated to the population, but the accuracy of the extrapolation cannot be measured. In one instance, auditors used professional judgment to select a specific item for testing. That sample item may not be representative of the population and, therefore, it would not be appropriate to extrapolate this result to the population.

To test compliance with requirements for payments for materials on hand, auditors, using professional judgment, selected a nonstatistical sample of materials on hand items from monthly reports, primarily through random selection. In addition, to test compliance with quality assurance testing requirements, auditors, using professional judgment, selected a nonstatistical sample of material for each of the major items selected primarily through random selection. Those sample items were not necessarily representative of the population and, therefore, it would not be appropriate to project those test results to the population.

To test compliance with change order requirements, auditors selected a nonstatistical sample of change orders, primarily through random selection. Results may be extrapolated to the population, but the accuracy of the extrapolation cannot be measured. In one instance, auditors used professional judgment to select an additional item for testing. That sample item may not be representative of the population and, therefore, it would not be appropriate to extrapolate this result to the population.

To test reasonableness of prices in the selected contract, auditors used professional judgment to select three highway construction contracts for comparison.

Information collected and reviewed included the following:

- Selected highway construction contract between the Department and Williams Brothers Construction Co., Inc.
- Department policies and procedures, manuals, and applicable rules and regulations.

- Department solicitation and bid documentation, evaluation criteria, contract questionnaires, pre-qualification documents, and other documentation related to procurement activities.
- Department documentation related to contract planning activities, including a project *Environmental Assessment*, information regarding the Waco Urbanized Transportation Improvement Program, and the *Value Engineering Study*.
- Department contract payment and related documentation.
- Department subcontractor records, including contractor requests for subcontractors and subcontractor history reports.
- Department contract change order documentation.
- Department quality assurance testing results reported by the Department's Waco District.
- Contractor monthly progress reports.
- Contractor daily work reports.
- Department information technology procedures manual, including related information system upgrade documentation.

Procedures and tests conducted included the following:

- Interviewed management and staff at the Department.
- Reviewed the Department's contract management policies and procedures.
- Reviewed the qualifications of Department project engineers.
- Reviewed the Department's contract planning documentation.
- Reviewed the Department's contract solicitation documentation.
- Reviewed prior state employment records, if any, for key contractor personnel.
- Reviewed the Department's procurement records for the contract audited, including conflict of interest disclosures, submission checklists, and bid documentation.
- Reviewed the Department's contract with Williams Brothers Construction Co., Inc.
- Reviewed the Department's records for work performed as of November 2014.

- Reviewed the contractor’s baseline schedule and monthly progress reports from January 2011 through November 2014 to test compliance with monitoring requirements.
- Reviewed the Department’s records related to subcontracted services obtained by the contractor.

Criteria used included the following:

- Texas Government Code, Chapters 322, 2155, 2254, 2261, and 2262.
- Title 34, Texas Administrative Code, Chapter 20.
- Title 43, Texas Administrative Code, Chapter 9.
- Texas Transportation Code, Chapters 201 and 223.
- The Department’s *Environmental Manual*, October 2004.
- The Department’s *Letting Manual*, December 2008.
- The Department’s *Project Development Process Manual*, June 2009 and July 2014.
- The Department’s *Plans Specifications and Estimates Preparation Manual*, July 2014, and previous versions as applicable.
- The Department’s *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges*, June 2004.
- The Department’s *Construction Contract Administration Manual*, October 2007 and March 2014.
- The Department’s *Financial Management Policy Manual*, August 2010, May 2011, October 2012, October 2013, and August 2014.
- The Department’s *Guide Schedule of Sampling and Testing*, August 2010.
- The Department’s *Quality Assurance Manual*, June 2005.
- Federal Highway Administration Form 1273, 1994.
- *State of Texas Contract Management Guide*, version 1.7.
- *SiteManager Contract Administration User Manual*, May 2006.

## **Project Information**

Audit fieldwork was conducted from October 2014 through March 2015. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and



perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following members of the State Auditor's staff performed the audit:

- Michael A. Simon, MBA, CGAP (Project Manager)
- Benjamin Nathaniel Keyfitz, CPA (Assistant Project Manager)
- Scott Armstrong, CGAP
- Scott Boston, MPAff
- Salem Chuah
- Arnton W. Gray
- Varun Jain
- Joshua Nwozor
- Bianca F. Pineda, CGAP
- Martin C. Torres
- Mary Ann Wise, CPA, CFE (Quality Control Reviewer)
- Willie J. Hicks, MBA, CGAP (Audit Manager)

## Status of the Department's Implementation of Prior Audit Recommendations

### Implementation Status Definitions

**Fully Implemented** - Successful development and use of a process, system, or policy to implement a prior recommendation.

**Substantially Implemented** - Successful development but inconsistent use of a process, system, or policy to implement a prior recommendation.

**Incomplete/Ongoing** - Ongoing development of a process, system, or policy to address a prior recommendation.

**Not Implemented** - Lack of a formal process, system, or policy to address a prior recommendation.

As of April 2015, the Department of Transportation (Department) had fully implemented two of four selected audit recommendations from *An Audit Report on Selected Contracts at the Department of Transportation* (State Auditor's Office Report No. 13-044, July 2013) that were related to the contract management activities and information technology systems that were within the scope of this audit. The Department's implementation of two other prior audit recommendations was determined to be incomplete/ongoing. Table 2 provides additional details (see text box for definitions of each implementation status).

Table 2

Status of the Department's Implementation of Prior Audit Recommendations				
No.	Recommendation	Implementation Status as Reported by the Department (as of December 2013)	Implementation Status as Determined by Auditors	Auditor Comments
1	The Department should adequately segregate the duties for its quality assurance materials testing to help ensure that the tester is not the same individual who reviews and approves the test.	Fully Implemented	Incomplete/Ongoing	Although the Department reported making programming changes to its SiteManager system, auditors were unable to verify whether the tester differed from the individual who reviewed and approved tests. Auditors identified quality assurance test records for which the Department did not consistently document the tester, reviewer, and authorizer. See Chapter 2-B for more information.
2	The Department should ensure that the tester and the reviewer are identified on the material test results documentation.	Fully Implemented	Incomplete/Ongoing	Auditors identified quality assurance records for which the Department did not consistently document the tester, reviewer, and authorizer. See Chapter 2-B for more information.
3	The Department should ensure that the individual who creates the daily work report is not the same individual who reviews or approves the report.	Fully Implemented	Fully Implemented	Auditors (1) verified that the Department made programming changes to its SiteManager system and (2) confirmed that those changes included a requirement that the individual who authorizes the daily work report cannot be the same individual who creates that report.

**Status of the Department's Implementation of Prior Audit Recommendations**

No.	Recommendation	Implementation Status as Reported by the Department (as of December 2013)	Implementation Status as Determined by Auditors	Auditor Comments
4	The Department should enforce its policy that change orders with original signatures be sent to the Construction Division after approval or update its policies to match its processes.	Incomplete/Ongoing	Fully Implemented	Auditors verified that the Department had updated its <i>Construction Contract Administration Manual</i> for automated change orders. Auditors also confirmed that change orders that the Department scanned and electronically submitted to its construction division included required signatures. See Chapter 2-C for more information.

## ***Related State Auditor's Office Work***

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Related State Auditor's Office Work		
Number	Product Name	Release Date
13-044	An Audit Report on Selected Contracts at the Department of Transportation	July 2013

Copies of this report have been distributed to the following:

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The Honorable Joe Straus III, Speaker of the House, Joint Chair  
The Honorable Jane Nelson, Senate Finance Committee  
The Honorable Robert Nichols, Member, Texas Senate  
The Honorable John Otto, House Appropriations Committee  
The Honorable Dennis Bonnen, House Ways and Means Committee

### **Office of the Governor**

The Honorable Greg Abbott, Governor

### **Department of Transportation**

Members of the Texas Transportation Commission  
Mr. Tryon D. Lewis, Chair  
Mr. Jeff Austin III  
Mr. J. Bruce Bugg, Jr.  
Mr. Jeff Moseley  
Mr. Victor Vandergriff  
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