

An Audit Report on

# Selected Design-build Contracts at the Department of Transportation

August 2016 Report No. 16-037



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SAO Report No. 16-037 August 2016

#### Overall Conclusion

The Department of Transportation (Department) has used the design-build project delivery method (design-build method) for highway construction projects. For all highway construction projects audited<sup>1</sup>, the Department procured the design-build projects<sup>2</sup> in accordance with most applicable statutes, rules, and other requirements (see text box for details on the four projects audited). The Department also made payments to the design-build contractors and generally monitored the contracts in accordance with applicable requirements. However, the Department does not have a fully established framework to standardize its use of the design-build method.

The Department should establish a comprehensive framework of policies and procedures to form standardized, documented, and repeatable processes for the procurement<sup>3</sup> and oversight of contracts for design-build projects to foster uniformity and potential efficiency across the **Department's districts**. The lack of a fully established and documented framework for design-build projects resulted in several weaknesses and inconsistencies in the **Department's** procurement and oversight of the four audited design-build projects. Specifically, for the four projects audited, the Department:

#### Design-build Projects Reviewed

From September 2012 through February 2016, the Department of Transportation (Department) had or was in the process of procuring 12 projects using the designbuild method, with a total estimated capital cost of \$8.0 billion (see Appendix 3 for more details). Auditors reviewed the following four design-build projects:

- 1. Energy Sector Roadway Repair. The project bundled under 1 contract the repair or rebuild of 31 roadways across the Department's Laredo, Corpus Christi, San Antonio, and Yoakum districts. The Department paid the contractor a total of \$187.4 million to repair or rebuild 30 of those 31 roadways.
- 2. IH35-E (Managed Lanes) (procured as a comprehensive development agreement, which used the design-build project delivery method). The project consists of the construction of managed (tolled) lanes, the addition of general purpose lanes north of the Dallas/Fort Worth area, and a bridge over Lake Lewisville. The estimated capital cost is \$1.4 billion.
- 3. US 181 Harbor Bridge Replacement (procured as a comprehensive development agreement, which used the design-build project delivery method). The project will replace the Harbor Bridge in Corpus Christi. The total project length, inclusive of the bridge and connecting roadways, is 6.44 miles, and it has an estimated capital cost of approximately \$1 billion.
- 4. SH 99 (Grand Parkway) Segments H, I-1, and I-2. The planned project lies northeast of Houston and will increase capacity by providing a new tolled two-lane controlled access facility with intermittent four-lane sections for passing, four additional toll lanes, and upgraded tolling equipment for an existing facility. The design-build contractor will build the 43.6 miles and will operate and maintain the facility through a comprehensive operations and maintenance agreement. The estimated capital cost is \$1.2 billion.

Source: The Department.

<sup>&</sup>lt;sup>1</sup> Three of the projects audited had completed the procurement phase; one project audited was in the procurement phase at the time of this audit.

<sup>&</sup>lt;sup>2</sup> That includes two comprehensive development agreement projects that used the design-build method. For purposes of this report, all four projects are referred to as "design-build projects."

<sup>&</sup>lt;sup>3</sup> For purposes of this report, "procurement" includes the planning, procurement, and formation of the contracts for design-build projects.

#### An Audit Report on Selected Design-build Contracts at the Department of Transportation SAO Report No. 16-037

- Did not document its determination to use the design-build method for the Energy Sector Roadway Repair project; the IH35-E (Managed Lanes) project; the US 181 Harbor Bridge Replacement project; or the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project.
- Did not ensure that the addenda to the requests for qualifications and requests for proposals were approved by the Department's authorized representatives identified for each project.
- Did not ensure that all personnel who evaluated the qualifications statements and proposals completed an individual scoring worksheet, as required.
- Did not have evidence that it considered a contractor's past performance during the evaluation process.
- > Did not consistently retain all required contract procurement records.

In addition, the Department lacks a consistent, documented process for altering the nature and scope of a design-build project while in procurement. Specifically, the Department does not have a documented process for:

- Determining the subsequent events that should occur after management has determined that all price proposals received are higher than the Department's cost estimate, including changing the project to lower the project's cost.
- Evaluating and determining the point at which a design-build project must be reprocured because a request for proposals has changed significantly.

For example, as of June 2016, the Department was considering significant changes to the design, scope, and the operations and maintenance agreement for the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project before issuing a request for "best and final offers." Without a written process to establish when design-build projects should be reprocured, there is an increased risk that the procurement may not be transparent and that the Department may not receive best value.

Auditors also identified areas in which the Department could improve the effectiveness and efficiency of its use of the design-build method. Those included:

- Establishing an approved template that specifies the form, substance, and standard provisions for design-build contracts.
- Documenting a policy or procedure to ensure that descriptive information related to the alternative technical concepts is redacted before evaluating the proposals.
- Reviewing the membership of its evaluation committees and subcommittees to ensure adequate segregation in the membership.

Documenting a policy or procedure to establish a process for performing a postmortem review during the close-out of a design-build project.

The Department performed several monitoring activities for the design-build contracts audited. Specifically, the Department (1) reviewed, approved, and processed payment requests as required, (2) approved and executed change orders as required, and (3) generally approved and supported changes in key personnel as required. However, the Department lacks comprehensive policies and procedures to establish consistent contract oversight processes for design-build projects.

Auditors communicated other, less significant issues in writing to Department management.

Table 1 presents a summary of the findings in this report and the related issue ratings. (See Appendix 2 for more information about the issue rating classifications and descriptions.)

Table 1

|            | Summary of Subchapters and Related Issue Ratings  |                           |  |  |
|------------|---|---------------------------|--|--|
| Subchapter | Title   | Issue Rating <sup>a</sup> |  |  |
| 1-A        | The Department Procured the Contracts for the Design-build Projects Audited in Accordance with Most Applicable Requirements   | Low                       |  |  |
| 1-B        | The Department Lacks a Fully Established Framework for the Design-build Procurement Process to Ensure Consistency and Accuracy Across All Design-build Projects   | Medium                    |  |  |
| 1-C        | The Department Lacks a Consistent, Documented Process for Altering the Nature and Scope of a Design-build Project While in Procurement  | High                      |  |  |
| 1-D        | The Department Should Consider Certain Opportunities for Improving the Effectiveness and Efficiency of Its Use of the Design-build Method   | Low                       |  |  |
| 2-A        | The Department Reviewed, Approved, and Processed Payments to Contractors, as Required; However, It Should Document and Implement Policies and Procedures to Standardize Its Payment Process for Design-build Projects | Low                       |  |  |
| 2-B        | The Department Approved and Executed Change Orders, as Required; However, It Should Approve All Change Orders in a Timely Manner and Consistently Document Certain Information  | Low                       |  |  |
| 2-C        | The Department Generally Approved and Supported Changes in Key Personnel, as Required; However, It Should Improve Its Oversight of Key Deliverables for Design-build Projects   | Low                       |  |  |

<sup>&</sup>lt;sup>a</sup> A subchapter is rated Priority if the issues identified present risks or effects that if not addressed could critically affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern and reduce risks to the audited entity.

A subchapter is rated High if the issues identified present risks or effects that if not addressed could substantially affect the audited **entity's ability to effectively administer the program(s)/function(s) audited. Prompt** action is essential to address the noted concern and reduce risks to the audited entity.

A subchapter is rated Medium if the issues identified present risks or effects that if not addressed could moderately affect the audited **entity's ability to effectively** administer program(s)/function(s) audited. Action is needed to address the noted concern and reduce risks to a more desirable level.

A subchapter is rated Low if the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

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

At the end of certain chapters in this report, auditors made recommendations to address the issues identified during this audit. The Department agreed with the recommendations in this report.

## Audit Objective and Scope

The objective of this audit was to determine whether the Department administered certain design-build contract management functions in accordance with policies, procedures, and other applicable requirements, including:

- Establishment of formal and consistent processes to guide project and contractor selection.
- Negotiation of contract provisions.
- Selection of projects and procurement of contracts.
- Contract management, including change order management and enforcement of contract provisions.
- Evaluation of project expenses and outcomes.

The scope of the audit covered design-build projects that the Department had procured or for which it had started the procurement process between September 1, 2012, and February 29, 2016. The following four design-build projects were selected for testing:

- Energy Sector Roadway Repair project.
- IH35-E (Managed Lanes) project.
- ▶ US 181 Harbor Bridge Replacement project.
- ▶ SH 99 (Grand Parkway) Segments H, I-1, and I-2 project.

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## Detailed Results

Chapter 1

The Department Procured the Contracts for the Design-build Projects Audited in Accordance with Most Applicable Requirements; However, It Lacks a Fully Established Framework to Ensure Consistency and Accuracy Across All Design-build Projects

Design-build Project Delivery Method

"Design-build" is a project delivery method that allows transportation agencies to contract with a single entity for both the design and construction of a highway project.

Traditionally, using the design-bid-build project delivery method, transportation agencies define the scope and requirements of a construction project by fully completing design documents (within the agency or with the assistance of design consultants) and then procuring construction contractors to build the project though a low bid process.

Using the design-build project delivery method, transportation agencies define the project scope and requirements through initial design documentation and then procure both the final design and construction through an evaluation of technical proposals and/or price proposals. Design-build projects can significantly vary in the amount of design included in the request for proposals, risks allocated to the design-build contractor, and procurement methods; however, the key element in each project is a single source of responsibility through one contract for both the design and the construction of a project.

Source: AASHTO Guide for Design-Build Procurement, American Association of State Highway and Transportation Officials, June 2008.

From September 2012 through February 2016, the Department of Transportation (Department) used or was in the process of using the design-build project delivery method (design-build method) for 12 highway projects (see text box for more information about the design-build method).

Of those 12 projects, as of June 2016, 1 was completed, 1 was substantially completed, 7 were in the construction phase, 1 was in the design phase, and 2 were in the contract procurement phase. Estimated capital costs for those 12 projects total \$8.0 billion (see Appendix 3 for more details). Auditors selected four design-build projects<sup>4</sup> for testing and determined that the Department paid contractors a total of \$823,940,685 as of March 15, 2016, on three<sup>5</sup> of those projects with an awarded contract.

The Department procured the design-build projects audited in accordance with most applicable requirements. However, it did not have a comprehensive set of approved policies and procedures to establish a

framework for its procurement for projects using the design-build method. The lack of a fully established and documented framework for design-build projects resulted in several weaknesses and inconsistencies in the Department's procurement for the four audited design-build projects.

In addition, the Department lacks a documented process for altering the nature and scope of a design-build project while in procurement. Auditors

<sup>&</sup>lt;sup>4</sup> That includes two comprehensive development agreement projects that used the design-build method. For purposes of this report, all four projects are referred to as "design-build projects."

<sup>&</sup>lt;sup>5</sup> The SH 99 (Grand Parkway) Segments H, I-1, and I-2 project was in the procurement phase at the time of this audit; therefore, no contract had been awarded.

also identified areas in which the Department could improve the effectiveness and efficiency of its use of the design-build method.

Chapter 1-A

The Department Procured the Contracts for the Design-build Projects Audited in Accordance with Most Applicable Requirements

Chapter 1-A Rating: Low <sup>6</sup> The Department procured the contracts for the design-build projects audited in accordance with most applicable requirements (one of the projects audited was still in the procurement stage). In addition, from September 2012 through February 2016, the Department had not entered into more than three design-build contracts per fiscal year, as limited by Texas Transportation Code, Chapter 223, Subchapter F.

For the four projects audited, the Department used a formula to evaluate proposals that allocated at least 70 percent of the evaluation scores to proposed costs, as required by Texas Transportation Code, Section 223.246(b). In addition, the Department:

 Consistently and fairly evaluated the qualifications statements (see text box) and proposals received in response to requests for qualifications and requests for proposals, respectively.

#### **Qualifications Statement**

A qualifications statement is a structured list of a design-build contractor's qualifications, such as project experience, technical qualifications, safety qualifications, and financial information. The contractor submits a qualifications statement to the Department in response to a request for qualifications for a designbuild project. The Department evaluates and competitively ranks the qualifications statements to establish a shortlist of design-build contractors that are eligible to receive the request for proposals.

Source: The Department.

- Adequately segregated duties by involving several different individuals in shortlisting vendors and selecting proposals, with an average of 20 individuals participating in the decision process.
- Masked certain identifying information in the financial proposals and the price proposals, as required by the Department's Evaluation Procedure Manuals created specifically for each project.

<sup>&</sup>lt;sup>6</sup> The risks related to the issues discussed in Chapter 1-A are rated as Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

- Documented its process for reviewing alternative technical concepts and determining their eligibility for inclusion in the design-build contractors' final proposals (see text box for more information about alternative technical concepts).
- Documented its consideration of the eligible alternative technical concepts submitted in the proposals for all four projects audited. However, it should be noted that the alternative technical concepts do not have a direct, measureable effect on the overall score given to proposals.
- Paid stipends to the unsuccessful proposers on each of the three projects audited for which it had awarded contracts, in accordance with Texas

issued for each project.

Transportation Code, Chapter 223, Subchapter F.

#### Alternative Technical Concepts

Alternative technical concepts are the designbuilder's proposed changes to the basic configurations, project scope, design criteria, or construction criteria for a given project. Those changes may provide a solution that is equal or better to the requirements in the request for proposals.

The Department requires alternative technical concepts to be reviewed before incorporation into the design-builder's proposal. The concepts provide flexibility to the proposers to enhance innovation and achieve efficiency and may include ideas that have a proprietary advantage.

The consideration of alternative technical concepts is not specifically delineated in the evaluation criteria or formulas that the Department uses to score proposals. Instead, the alternative technical concepts can indirectly affect the overall scoring of a proposal by allowing the contractor to submit an innovative technical proposal and/or a lower price proposal due to anticipated cost savings.

Sources: The Department and AASHTO Guide for Design-Build Procurement, American Association of State Highway and Transportation Officials, June 2008.

 Adequately secured access to the electronic and paper copies of the proposals that prospective design-build contractors submitted.

Ensured that, of the three design-build projects audited for which the Department had awarded a contract, the executed contracts conformed to the general form of the contract included in the request for proposals

Chapter 1-B

The Department Lacks a Fully Established Framework for the Design-build Procurement Process to Ensure Consistency and Accuracy Across All Design-build Projects

Chapter 1-B Rating: Medium<sup>7</sup> The Department lacks policies and procedures to ensure that contracts for design-build projects are procured in a consistent manner.

The Department does not have a comprehensive set of approved policies and procedures to establish a framework for the procurement for projects using the design-build method. The Department had documentation that offered some guidance. That documentation included applicable statutes and administrative rules, the provisions in the contracts, the *Evaluation Procedures Manuals* created specifically for each project, and the requirements in the requests for qualifications and requests for proposals for each project. However, that documentation did not address all key elements of the design-build procurement method and lacked sufficient procedural detail to ensure that planning, procurement, and formation of design-build contracts were consistent across all design-build projects. While the Department had some documented procedures for its procurement for design-build projects, the majority of those procedures were in draft form as of February 2016.

The Department did not have documented and approved policies and procedures for the following aspects of the design-build procurement process:

- Evaluating a project's suitability to the design-build procurement method.
- Preparing, approving, and issuing addenda to requests for qualifications and requests for proposals, including designating alternative Department representatives for approving and issuing addenda and communicating those addenda to contractors.
- Determining and documenting the relative weighting and formulas<sup>8</sup> with which proposals should be evaluated and ranked when considering best value.
- Retaining contract and procurement-related documentation across all design-build projects.

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<sup>&</sup>lt;sup>7</sup> The risks related to the issues discussed in Chapter 1-B are rated as Medium because they present risks or results that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concerns and reduce risks to a more desirable level.

<sup>&</sup>lt;sup>8</sup> Texas Transportation Code, Chapter 223, Subchapter F, requires that the formula used to evaluate proposals must allocate at least 70 percent of the weighting to the cost proposal.

Importance of Policies and Procedures

The American Association of State Highway and Transportation Officials recommends that transportation agencies that wish to use design-build delivery repeatedly when appropriate projects present themselves should strive to create a set of policies and document templates. Standardization of certain documents and processes is desirable to promote internal consistency for the agency and external efficiency for the construction industry.

Source: AASHTO Guide for Design-Build Procurement, American Association of State Highway and Transportation Officials, June 2008

The American Association of State Highway and Transportation Officials recommends that transportation agencies have documented policies and procedures to help ensure consistency (see text box).

Auditors identified inconsistencies and weaknesses in the Department's procurement for the four projects audited.

Several inconsistencies and weaknesses were identified in the Department's procurement for the four projects audited, potentially caused by the lack of an adequate framework supported by comprehensive policies and procedures. Specifically:

The Department did not document its determination to use the design-build method for the Energy Sector Road Repair project; the IH35-E (Managed Lanes) project; the US 181 Harbor Bridge Replacement project; or the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project. Department management indicated that discussions were held concerning the procurement methods to be used on those projects, but there was no documented support for the Department's decisions.

For example, without documentation of the Department's determination, it is unclear why the Department procured the Energy Sector Roadway Repair project using the design-build method. For that project, the Department bundled the repair or rehabilitation of multiple roadways under a single design-build project. The design-build method allows the Department to transfer the risk of completing a project's final design to the design-build contractor; a project's final design is a key deliverable of a design-build contract. Because the Department had completed the final design for each of the roadways prior to procuring the Energy Sector Roadway Repair project, that project was an atypical candidate for the design-build method. However, Department management stated that the Department considered other factors when deciding to bundle the roadways into a single design-build project. Those factors included being able to achieve a greater economy of scale when purchasing construction materials and the potential benefit of having a single contractor responsible for managing the repair of all 31 roadways. However, the Department could not provide any documentation showing what the other factors were and how they were evaluated.

<sup>&</sup>lt;sup>9</sup> The procurement for the Energy Sector Roadway Repair project occurred prior to amendments made to Texas Transportation Code, Chapter 223, Subchapter F, which expressly prohibit (1) bundling multiple roadways under one design-build contract and (2) using the design-build method for highway projects that have been substantially designed by the Department or another entity other than the design-build contractor.

To strengthen its decision-making process, the Department entered into a multi-year, inter-agency contract with the University of Texas Center for Transportation Research, to provide, among other things, a tool to help the Department determine a project's suitability to the design-build method. The contract was executed in September 2013 and the decision support tool was provided to the Department in June 2015. The Department considered the results of the tool in its decision to use the design-build method for a project that was presented to and approved by the Texas Transportation Commission on April 28, 2016.

- The Department did not ensure that the addenda to the requests for qualifications and requests for proposals were approved by the Department's authorized representatives identified for each project. The request for qualifications and request for proposals for each project identify the Department's authorized representatives who can approve changes to those documents through the issuance of addenda. While Department personnel approved all 26 addenda made to the requests for qualifications and requests for proposals for the four projects reviewed, 5 (19.2 percent) of those 26 addenda were approved by managers other than the Department's authorized representatives.
- The Department did not ensure that all personnel who evaluated the qualifications statements and proposals completed an individual scoring worksheet, as required. Across all four projects audited, 152 (63.6 percent) of the 239 individual evaluators' scoring worksheets were incomplete. In addition, 757 (31.4 percent) of the 2,408 criteria on the individual scoring worksheets did not include the reason a rating was given, as required by the *Evaluation Procedures Manuals*<sup>10</sup> for those projects. Although there were no significant discrepancies in the individual evaluators' scoring worksheets that the Department was able to provide for the audited projects, incomplete scoring worksheets could undermine the rigor and veracity of the Department's evaluation process.
- The Department did not have evidence that it considered a contractor's past performance during the evaluation process. Title 43, Texas Administrative Code, Section 9.153 (g), requires the Department to evaluate proposals based on the results of performance evaluations it conducted. The request for qualifications for both the US 181 Harbor Bridge Replacement project and the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project stated that management would use the results of performance evaluations to evaluate contractors' qualifications statements. In addition, the consensus score sheet for the US 181 Harbor Bridge

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<sup>&</sup>lt;sup>10</sup> Evaluation Procedures Manuals are created specifically for each design-build project to outline the methodology and criteria for evaluating the qualifications and proposals submitted by design-build contractors during the procurement process for each project.

Replacement project instructed the evaluation and selection recommendation committee to consider those performance evaluations. However, the Department's evaluation criteria did not contain a step to consider the design-build contractors' past performance during the procurement for the four projects audited. Department management stated that it discussed contractors' past performance during the procurement for the four projects audited, but it could not provide any additional evidence to support that assertion.

The Department did not consistently retain all required contract procurement records. The Department does not have a standardized process that ensures that it consistently maintains required contract procurement documentation across projects. Although the Department has document control and record retention procedures, it did not retain all documentation of mandatory training attendance, signed conflict disclosure statements, signed confidentiality agreements, and individual scoring sheets for the projects audited. Table 2 shows the type and amount of the missing documentation for the four projects audited.

Table 2

| Percentage of Missing Documentation for the Four Projects Audited |   |                                       |                              |  |
|---|---|---------------------------------------|------------------------------|--|
|   | Design-build Project                      |                                       |                              |  |
|   | US 181<br>Harbor<br>Bridge<br>Replacement | Energy<br>Sector<br>Roadway<br>Repair | IH35-E<br>(Managed<br>Lanes) | SH 99<br>(Grand<br>Parkway)<br>Segments H,<br>I-1, and I-2 |
| Description of Documentation                                      | Percentage of Documentation Missing       |                                       |                              |  |
| Training Documents  | 49%                                       | 46%                                   | 75%                          | 46%  |
| Conflict Disclosure Statements                                    | 44%                                       | 51%                                   | 55%                          | 61%  |
| Confidentiality Agreements  | 6%  | 8%                                    | 17%                          | 3%   |
| Individual Scoring Sheets for Qualifications Statements           | 17%                                       | 34%                                   | 100%                         | 0%   |
| Individual Scoring Sheets for Proposals                           | 48%                                       | 0%                                    | 100%                         | Not Applicable   |

Source: Department documentation.

#### Recommendations

#### The Department should:

- Develop, document, and implement comprehensive policies and procedures to establish a consistent process for the procurement for design-build projects.
- Perform an evaluation to determine a project's suitability to the designbuild project delivery method and document its justification based on the results.
- Ensure that all evaluators complete an individual evaluation scoring worksheet.
- Include prior performance as a part of its criteria for evaluating potential contractors during the procurement for design-build projects, and document its evaluation of prior performance.
- Document and implement procedures to formalize its process to ensure that addenda for requests for qualifications and requests for proposals are prepared, approved, and released in a consistent manner.
- Ensure that all evaluators attend and complete the required training prior to evaluating documentation related to design-build projects.
- Ensure that all evaluators and support personnel sign conflict disclosure statements and confidentiality agreements prior to accessing, viewing, or handling documentation related to design-build projects.
- Update its records retention schedule and implement an effective, uniform, agency-wide process for maintaining contract procurement documentation across all design-build projects. That process should specify the documents to be retained to both comply with the records retention schedule and to document that the Department followed its procurement procedures.

#### Management's Response

TxDOT agrees with the recommendations and will establish a comprehensive framework of policies and procedures for the design-build procurement process, including a formalized process for the preparation, approval and issuance of addenda.

TxDOT will ensure that all evaluators attend training and complete individual evaluation scoring worksheets. TxDOT has finalized and implemented

Procedure 314 Document Control of Evaluation Materials, which incorporates additional steps and checklists for Document Control personnel to perform and utilize during the evaluation period. These tools will assist TxDOT in ensuring that all evaluators and support personnel sign Confidentiality Agreements and Conflict Disclosure Statements prior to accessing documentation related to the procurement of design-build projects and that a records verification audit is performed. Please reference the procedure and forms 314-F4 Authorized Personnel Allowed Access to Evaluation Materials and 314-F8 Evaluation Materials Document Control Checklist.

As noted in the audit, a decision tool to determine the suitability of the design-build delivery method for a project has been developed and is being implemented. This tool will be utilized to document the results to support the determination to use a design-build delivery method for projects.

TxDOT believes that all addenda were approved by the Authorized Representative since a designee approved and signed for the issuance of the addenda for the 5 incidents cited in the report. This provision is typically specified in the Instructions to Proposers (ITP). See below for an example from the Harbor Bridge ITP Section 2.2.1:

"From time to time during the procurement process, TxDOT may designate another Authorized Representative or representatives to communicate with Proposers on behalf of TxDOT in connection with the procurement."

For future design-build procurements, however, TxDOT will formally document and communicate the Department's designations of Authorized Representatives.

During the spring of 2014, the Department implemented the use of past performance evaluations, which had been conducted in 2013, during the procurement of a project to support the evaluation scoring. A contractor's past performance was considered for the US 181 Harbor Bridge Replacement and the SH 99 (Grand Parkway), Segments H, I-1, I-2 projects. The contractor's past performance was taken into consideration as documented in the Evaluation Procedures Manuals for these projects and the 2013 and 2014 CDA Contractor Performance Evaluation Summary documents were provided to both evaluation teams for consideration during the RFQ evaluation period. TxDOT will continue to perform contractor evaluations and will document and utilize them during the evaluation process.

TxDOT believes that the Department did consistently retain all required contract procurement records. Since September 2014, TxDOT has had formalized and approved procedures for managing and retaining contract and procurement related documentation across all design-build projects

(Procedure 102 Document Control and Procedure 104 Records Management). Additionally, finalized written guidance and quick reference guides regarding taxonomy, file and library structure are included as references in these procedures as well as the current TxDOT Records Retention Schedule. The scopes of these procedures include both procurement and contract management documents and records.

While the current Records Retention Schedule (RRS) for the Department does include a record series for Bid Documentation (Accounting, Contracting, and Financial Records 08 – page 142) and routine Contracts (Accounting, Contracting, and Financial Records 09 – page 143), the Department did not believe these applied to the procurement documentation for non-traditional contracts, including Design Build Agreements and Comprehensive Development Agreements. Therefore, at the time of the procurement of these projects, some of the documentation was not retained since they were not considered records that required a retention period.

However, the Department agrees that procurement documentation should be consistently maintained and required records have been identified. The RRS was updated in March 2016 and included the addition of a series for procurement records for design-build projects. At this time, the revised TxDOT RRS has not been approved by the Texas State Library and Archives Commission and the TxDOT Records Manager does not anticipate approval of this revised RRS until late 2016. Once the RRS is approved, TxDOT will update all related procedures and the filing structure within the electronic content management system utilized for records management for design-build projects.

Person Responsible: Director, Project Finance, Debt and Strategic Contracts Division

Target Date: March 31, 2017

Chapter 1-C

The Department Lacks a Consistent, Documented Process for Altering the Nature and Scope of a Design-build Project While in Procurement

Chapter 1-C Rating: High <sup>11</sup> The Department does not have a consistent, documented process for how to proceed if all the price proposals for a proposed project are higher than the amount that the Department estimated for the project. Specifically, the Department lacks policies and procedures for the following:

- Determining the subsequent events that should occur after management has determined that all price proposals received for a design-build project are not "financially feasible" (when the price proposals received are all higher than the Department's cost estimate), including changing the project to lower the project's cost.
- Evaluating and determining the point at which a design-build project must be reprocured because a request for proposals has changed significantly. Specifically, potentially significant changes to a project's design and maintenance plan could garner additional interest from other qualified contractors that initially refrained from participating based on the project's original design scope and the terms of the accompanying maintenance plan.

The Department should establish a consistent, documented process for the considerations discussed above and determine how or whether that process should be applied to its current procurement for the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project. Having a consistent, documented process in place is important because the Department issued a final request for proposals for that project in October 2015. As of June 2016, the Department was considering a number of changes that may significantly change the nature and scope of that project and the associated operations and maintenance agreement before issuing a request for "best and final offers." Auditors did not identify instances of impropriety in the testing of the ongoing procurement for the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project.

Because the procurement for the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project was ongoing as of the end of audit fieldwork in June 2016, auditors did not review any instructions the Department may have subsequently issued to proposers. Therefore, auditors cannot make any determinations about how proposed changes may affect that procurement.

An Audit Report on Selected Design-build Contracts at the Department of Transportation SAO Report No. 16-037

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<sup>&</sup>lt;sup>11</sup> The risks related to the issues discussed in Chapter 1-C are rated as High because they present risks or results that if not addressed could substantially affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern and reduce risks to the audited entity.

However, without a consistent, documented process establishing when design-build projects should be reprocured due to the nature and extent of changes to the project, there is an increased risk that a procurement may not be transparent and that the Department may not receive best value. Specifically, the potentially significant changes to a project's design and maintenance plan could garner additional interest from other qualified contractors that initially refrained from participating based on their consideration of the project's original design scope and the terms of the accompanying maintenance plan (see text box for the time line of SH 99 (Grand Parkway) Segments H, I-1, and I-2 project procurement).

The Department could also benefit from conducting an analysis of its procurement for the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project to identify the reasons the price

Time Line of Procurement for the SH 99 (Grand Parkway)
Segments H, I-1, and I-2 Project

- The Department issued a request for qualifications for the project on July 31, 2014, and subsequently modified it through the issuance of five addenda.
- The Department issued the fifth and final addendum to its request for qualifications on September 26, 2014, and announced its shortlist of the three most qualified contractors on October 30, 2014.
- The Department issued a final request for proposals on April 30, 2015, which it subsequently modified through the issuance of five addenda.
   The Department issued the fifth addendum to the final request for proposals on October 22, 2015.
- The Department received proposals from the three shortlisted proposers on October 27, 2015. The Department asserted that the proposals received were not financially feasible; therefore, it conducted a technical rescoping and financial feasibility review to reduce the project's estimated cost. The rescoping potentially included changes to the design of the project and changes to the maintenance plan.
- The Department sent a letter on May 27, 2016, to notify the three proposers of its completed rescoping and financial feasibility review and its intent to issue a sixth addendum to the final request for proposals by the end of June 2016 to formally request the proposers' "best and final offers."

Source: The Department.

proposals it received were significantly higher than the estimated cost. Based on the results of that analysis, the Department could take actions to improve its processes for estimating the costs of future design-build projects.

#### Recommendations

#### The Department should:

- Establish a consistent, documented process for altering the scope and major components of a project during a design-build procurement. That process should include:
  - Establishing the subsequent events that should take place after management has determined that all price proposals received on a given design-build project are higher than the Department's cost estimate for the project.

- Establishing the steps for changing a design-build project to lower its
  cost in the event that the Department cannot obtain a proposal that
  has a lower cost than the cost the Department is willing to pay for the
  project.
- Establishing criteria for evaluating and determining whether a designbuild project should be reprocured due to significant changes to the project's original scope or other changes.
- Consider conducting an analysis of its procurement for the SH 99 (Grand Parkway) Segments H, I-1, and I-2 project to identify the reasons the price proposals it received were significantly higher than the estimated cost to help improve its cost-estimation process for future design-build projects.

#### Management's Response

TxDOT agrees with the recommendations and will document its process for changing the scope and major components of a project during a design-build procurement.

TxDOT continues to question whether this issue "affect(s) the audited entity's ability to effectively administer the program" per the definition of the "High" rating in the Report.

It is important to note that changes to project scope can vary greatly and be due to a number of factors (e.g. environmental, stakeholder concerns, financial, changing economic or market conditions, project costs exceeding available funding) and will be dependent on the stage of the procurement process. TxDOT's policy and approach when implementing a change is to do so in a manner consistent for all proposers. TxDOT has historically utilized the Federal Acquisition Regulation (FAR) part 15 as the basis for determining whether a change to a Request for Qualifications (RFQ) or Request for Proposal (RFP) is so significant the procurement must be canceled and begun again. Relevant language from the FAR Amending the Solicitation (Section 15.206) is as follows:

- "(a) When, either before or after receipt of proposals, the Government changes its requirements or terms and conditions, the contracting officer shall amend the solicitation.
- (e) If, in the judgment of the contracting officer, based on market research or otherwise, an amendment proposed for issuance after offers have been received is so substantial as to exceed what prospective offerors reasonably could have anticipated, so that additional sources likely would have submitted offers had the substance of the amendment been known to them,

the contracting officer shall cancel the original solicitation and issue a new one, regardless of the stage of the acquisition."

Based on the FAR language cited above, the Department decided to proceed with the procurement rather than start a new one for the SH 99 Grand Parkway Project: Segments H, I-1, and I-2.

While we acknowledge the need for a documented process for decision making on whether to continue with a procurement when the proposals are not acceptable, the Department has detailed processes and procedures in place throughout the procurement process and specifically with regard to proposal evaluations. We have independent review committees; specified evaluation criteria such as, but not limited to, relevant experience, safety records, proposed innovation, expedited construction schedules, technical approach, financial stability, and cost. TxDOT also includes a blinding process to prevent impropriety during evaluations.

A new documented process, therefore, will expand on existing policies that consider the degree to which a modification to the procurement impacts the competitive process and provide a record of the considerations when altering the procurement. Documentation will allow for future review by others.

TxDOT will consider conducting a review of the SH 99 Grand Parkway Project: Segments H, I-1, and I-2 to identify and document reasons why the original pricing may have been higher than anticipated. Steps may include, but not be limited to, review of the socioeconomic analysis which was performed during the procurement and scope alteration; review of the programmatic cost estimating template from Procedure 120 along with any necessary updates, and conducting a lessons learned workshop.

Person Responsible: Director, Project Finance, Debt and Strategic Contracts Division

Target Date: March 31, 2017

Chapter 1-D

The Department Should Consider Certain Opportunities for Improving the Effectiveness and Efficiency of Its Use of the Designbuild Method

Chapter 1-D Rating: Low <sup>12</sup> Auditors identified areas in which the Department could improve the effectiveness and efficiency of its procurement process for design-build projects. The Department should consider the following opportunities to improve the effectiveness and efficiency of its use of the design-build method. Specifically:

- The Department should consider establishing an approved template that specifies the form, substance, and standard provisions for design-build contracts. The Department typically uses the contract from the most recently procured design-build project as the baseline when forming a contract for a subsequent design-build project. While all applicable state and federally required contract provisions for design-build projects were included in the final contracts for the three applicable projects audited, the format and layout of the provisions varied among the three projects. Although the Department is exempt from its requirements, the *State of Texas Contract Management Guide* states that it is best practice to establish standard contract templates.
- The Department should consider documenting a policy or procedure to ensure that descriptive information related to the alternative technical concepts is redacted before the price proposals are evaluated. The Department redacts descriptive information in price proposals, such as contractor name and contractor logos, so that price data is the only information evaluators will use in scoring them. However, the Department did not redact descriptive information related to the alternative technical concepts for 3 of the 12 price proposals that auditors tested. According to the Department's draft policy, failing to redact descriptive information regarding the alternative technical concepts could allow the reviewers to connect the alternative technical concepts to their respective proposers.
- The Department should consider reviewing the membership of its evaluation committees and subcommittees to ensure adequate segregation in the membership. Specifically, two individuals in the Department's former Strategic Projects Office were members of the evaluation and selection recommendation committee and the alternative technical concepts executive committee during procurement for the Harbor Bridge Replacement project. The alternative technical concepts executive committee has the final

<sup>&</sup>lt;sup>12</sup> The risks related to the issues discussed in Chapter 1-D are rated as Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

authority to approve or deny a design-build contractor's request to incorporate alternative technical concepts into its cost and technical proposals for a design-build project. The evaluation and selection recommendation committee is responsible for determining a consensus score for each proposal, which it then uses to determine which proposal presents the best value. Therefore, an individual serving on both committees could potentially wield undue influence on the evaluation process.

The Department should consider documenting policies and procedures to establish a process for performing a postmortem review during the close-out of a design-build project. Although the Department is exempt from the State of Texas Contract Management Guide, the Department's negotiated contracts policy states that construction contracts related to highway construction will be handled in accordance with the Texas Transportation Code and consistent with the State of Texas Contract Management Guide whenever possible. The State of Texas Contract Management Guide, which provides contracting suggestions and best practices, states that contract close-out includes an assessment of the success of the contract and determining whether there are any lessons learned for future contracts. The Department could benefit from implementing a documented postmortem review process at the conclusion of each design-build project. As a part of that process, the Department should consider performing a thorough cost analysis to determine whether there were any savings gained through its use of the design-build method. In addition, the Department should consider performing an end-to-end review of the completed project to identify any "lessons learned" that the Department could use to improve its procurement and oversight processes on future design-build projects. Of the design-build projects reviewed, only the Energy Sector Roadway Repair project was complete. The Department did not analyze whether there were any cost savings from using the design-build method on the Energy Sector Roadway Repair project or whether there were any lessons learned that it could use to improve its design-build contracting process going forward.

#### Recommendations

#### The Department should consider:

- Developing contract templates that have the general form, substance, and standard terms to ensure consistency across contracts for all designbuild projects.
- Implementing a policy or procedure to require the redaction of descriptive information in alternative technical concept documentation before evaluators review that documentation.
- Implementing policies and procedures to help ensure that members of the evaluation and selection recommendation committee do not also serve on the alternative technical concepts executive committee during procurement for a design-build project.
- Implementing policies and procedures to establish a project close-out process, including a documented postmortem analysis of cost savings and the identification of lessons learned.

#### Management's Response

TxDOT agrees with the recommendations and has already begun developing a contract template. TxDOT will finalize and implement the blinding process to include ensuring the anonymity of proposers regarding ATC descriptive documentation; a procedure for the composition of the independent Evaluation and Selection Recommendation Committee and Alternative Technical Concepts Executive Committee; and the close-out process at substantial completion of project construction.

Person Responsible: Director, Project Finance, Debt and Strategic Contracts Division

Target Date: June 30, 2017

Chapter 2

The Department Monitored the Contracts Audited in Accordance with Most Requirements; However, It Should Document and Implement Policies and Procedures to Strengthen and Standardize Its Oversight Processes Across All Design-build Projects

The Department performed several monitoring activities for the contracts audited. Specifically, the Department (1) reviewed, approved, and processed payment requests as required, (2) approved and executed change orders as required, and (3) generally approved and supported changes in key personnel as required.

However, the Department lacks comprehensive policies and procedures to establish consistent contract oversight processes for design-build projects. The Department outlined the requirements and responsibilities for it and other parties through the provisions in the individual contracts and agreements for design-build projects. Those provisions generally aided the Department in making payments to the contractors and monitoring the contractors in accordance with applicable requirements. However, having comprehensive policies and procedures would help ensure that the Department meets all requirements in a consistent manner across all of its design-build projects.

In addition, the Department should document and implement policies and procedures to ensure compliance with requirements and consistency in its decentralized oversight of design-build projects. During the scope of this audit (September 1, 2012, through February 29, 2016), the Department's Strategic Projects Division was responsible for both the procurement for a design-build project and contract oversight during the implementation of the project's design and construction. However, in February 2016, the Department reorganized so that a newly formed Strategic Contract Management Division is responsible for procurement for a design-build project and for setting the policy and procedures for contract oversight during the implementation of the project's design and construction. The Department's districts are responsible for the contract oversight during the implementation of the project's design and construction. In July 2016, the Department merged its Strategic Contract Management Division with the Project Finance and Debt Management Division to create the Project Finance, Debt, and Strategic Contracts Division.

#### Chapter 2-A

The Department Reviewed, Approved, and Processed Payments to Contractors, as Required; However, It Should Document and Implement Policies and Procedures to Standardize Its Payment Process for Design-build Projects

Chapter 2-A Rating: Low <sup>13</sup> In general, the Department reviewed, approved, and processed payments to the design-build contractors as required. Contractors submit payment requests, which are referred to as "draw requests." As of March 15, 2016, the Department had processed 57 draw requests for three<sup>14</sup> of the audited design-build projects (see Table 3).

Table 3

| Draw Requests Submitted and Processed as of March 15, 2016 |                         |                    |  |  |
|--|-------------------------|--------------------|--|--|
| Design-build Project                                       | Number of Draw Requests | Total Dollar Value |  |  |
| Energy Sector Roadway Repair                               | 21                      | \$ 187,435,063.81  |  |  |
| IH35-E (Managed Lanes)                                     | 32                      | 621,617,519.93     |  |  |
| US 181 Harbor Bridge Replacement                           | 4                       | 14,888,101.44      |  |  |
| Totals   | 57                      | \$ 823,940,685.18  |  |  |

Source: Department documentation.

The amounts for 56 (98.2 percent) of the 57 draw requests tested reconciled with the Department's accounting system. The exception was one draw request for \$14,275,471.41 for the Energy Sector Roadway Repair project that the Department entered directly into the Uniform Statewide Accounting System (USAS), rather than into its own accounting system, when the Department transitioned to its current accounting system in November 2014. According to the Department, that deviation from standard procedures was necessary due to an issue created by the manner in which the Energy Sector Roadway Repair project was initially entered into the Department's current accounting system. However, the Department did not make a corresponding entry in its current accounting system, resulting in the project expenditures being understated by \$14,275,471.41 in its accounting system.

<sup>&</sup>lt;sup>13</sup> The risks related to the issues discussed in Chapter 2-A are rated as Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

<sup>&</sup>lt;sup>14</sup> The SH 99 (Grand Parkway) Segments H, I-1, and I-2 project was in the procurement phase at the time of this audit; therefore, the Department had not received any draw requests for that project.

Auditors examined 9 of the 57 draw requests, totaling \$144,546,774.85, in greater depth. For those nine draw requests, the Department (1) conducted reviews of the submitted draw requests in a timely manner and (2) included all required supporting documentation. The draw requests also included the appropriate approvals from the quality acceptance firms (see text box for more information about quality assurance). The owner verification firms reviewed the work of the quality acceptance managers for all six of the nine audited draw requests that included construction activities. The work that the owner verification firms reviewed included daily inspections, sample testing results, and laboratory testing results.

## Quality Assurance for Design-build Projects

The Department uses the following entities to help ensure that a contractor properly performed the work related to draw requests:

- Quality acceptance firm Design-build contractors are required to hire an independent quality acceptance firm and appoint a quality acceptance manager who is responsible for management and quality acceptance function. Draw requests are required to contain a certification signed and sealed by the quality acceptance manager stating that all work has been checked or inspected and conforms to the contract
- Owner verification firm The Department hires a general engineering consultant that verifies the accuracy of work performed by the quality acceptance firm through independent testing.

Source: The Department.

For submitting, reviewing, and approving draw requests, the Department defined the roles of all parties involved through (1) design-build agreements and technical provisions, (2) contracts with general engineering consultants, and (3) various project-related plans. However, while using project-specific documents can help the Department make certain payments in accordance with requirements, not having Department-wide policies and procedures increases the risk that draw requests will not be reviewed and approved consistently across all design-build projects. The Department's methods of approving draw requests varied among the projects audited. For example:

The general engineering consultant on the Energy Sector Roadway Repair project documented its approval of project schedule updates, which partly determine the values of draw requests, by including a signed certification with each draw request submittal (see text box for more information about project schedule updates). However, that approval was documented through notes on a comment log for the IH35-E (Managed Lanes) project. 15

#### Project Schedule Updates for Design-build Projects

A design-build contractor submits a project baseline schedule to the Department prior to construction. That schedule allocates project costs to specific construction activities. The design-build contractor then sends the Department a monthly update for that schedule to show actual progress. That update provides support for the payment amount that the design-build contractor is requesting in a draw request. The general engineering contractor must approve that update before the Department will pay a draw request.

Source: The Department.

<sup>&</sup>lt;sup>15</sup> As of February 2016, the Harbor Bridge Replacement Project was in the early design phase and, therefore, there had not been any project schedule updates.

The Department used invoice approval memos, which appeared to be a standard form, to document the required approvals of the draw requests for the Energy Sector Roadway Repair project and the US 181 Harbor Bridge Replacement project. However, the Department did not use the invoice approval memo to document the required approvals for the draw requests on the IH35-E (Managed Lanes) project.

The various methods that the Department used to approve the draw requests and the project schedule updates appeared to be effective. However, the Department should document and implement policies and procedures to establish a standard approval method to ensure compliance with requirements and consistency as the Department moves toward a decentralized oversight function for its design-build projects.

Recommendations

#### The Department should:

- Ensure that it resolves any reconciling items associated with the \$14,275,471.41 Energy Sector Roadway Repair project draw request.
   Additionally, the Department should ensure that it resolves all reconciling items between its accounting systems and USAS in a timely manner.
- Develop, document, and implement policies and procedures to establish a consistent process for documenting, reviewing, approving, and paying draw requests for design-build contracts.

#### Management's Response

TxDOT agrees with the recommendation and the one reconciliation item was corrected prior to the completion of the audit. The increase in reconciliation items and delay in resolution was due to the implementation of a new accounting system which was expected. All outstanding items are identified as reconciliation items and expected to be tracked until all outstanding items are resolved.

Person Responsible: Financial Reporting Manager, Financial Management Division

Target Date: August 31, 2017

TxDOT agrees with the recommendations and will formally document the policies and procedures for draw requests to standardize the payment process.

Person Responsible: Director, Project Finance, Debt and Strategic Contracts

Division

Target Date: March 31, 2017

Chapter 2-B

The Department Approved and Executed Change Orders, as Required; However, It Should Approve All Change Orders in a Timely Manner and Consistently Document Certain Information

Chapter 2-B Rating: Low <sup>16</sup> The Department approved and executed change orders to the audited design-build projects. Specifically, all change orders tested appeared reasonable in purpose and price and did not affect the final completion date of the projects. Table 4 shows the number and amount of those change orders.

Table 4

| Change Orders Submitted and Processed as of February 29, 2016  |                            |  |   |
|--|----------------------------|--|---|
| Design-build Project   | Number of<br>Change Orders | Total Net<br>Dollar Value<br>(in millions) | Percentage Increase<br>from Initial<br>Contract Value |
| IH35-E (Managed Lanes)   | 21                         | \$17.5                                     | 2.1%  |
| Energy Sector Roadway Repair   | 107                        | \$39.3                                     | 26.2%   |
| US 181 Harbor Bridge Replacement <sup>a</sup>  | 0                          | \$0  | 0.0%  |
| <sup>a</sup> The US 181 Harbor Bridge Replacement project was still in the design phase as of February 29, 2016. |                            |  |   |

Source: Department documentation.

The Energy Sector Roadway Repair project had 107 total change orders. Three of those change orders, however, accounted for 70.1 percent of the total cost for all of the change orders (see Table 5). Those three change orders added repairs to three additional roads. The Department had included repairs on those three roads in its request for proposals; therefore, the Department determined that those additional road repairs had been competitively procured and did not constitute a significant change to the project's proposed scope.

<sup>&</sup>lt;sup>16</sup> The risks related to the issues discussed in Chapter 2-B are rated as Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Table 5

| Energy Sector Roadway Repair Project Change Orders                 |                            |  |  |
|--|----------------------------|--|--|
| Change Order Type  | Number of<br>Change Orders | Total Net<br>Dollar Value<br>(in millions) | Percent of<br>Total Cost of<br>All Change Orders |
| Add Repairs to Roads Included in<br>Original Request for Proposals | 3                          | \$27.5                                     | 70.1%  |
| Other Change Orders  | 104                        | 11.8                                       | 29.9%  |
| Totals   | 107                        | \$39.3                                     |  |

Source: Department documentation.

The Department should consistently review and document its justification for each change order and execute change orders in a timely manner. For the projects audited:

The Department permitted work to proceed on a requested change to the IH35-E (Managed Lanes) project through the issuance of a directive letter in July 2014, which capped the costs at \$14.6 million (see text box for information about directive letters and change orders). The related change order, totaling \$13.6 million, was not approved by the Department's executive director until May 2016 (approximately 22 months later). While the project's contract allows work to proceed in advance of an executed change order by issuance of a directive letter, the Department lacks documented policies or procedures to ensure that change orders are executed in a timely manner when a directive letter has been

Directive Letters and Change Orders

A <u>directive letter</u> is a letter from the Department that directs the design-build contractor to perform specific work pending the execution of a change order. Issuance of a directive letter is not evidence that a contract change has occurred, which could entitle the contractor to additional compensation. The Department and the design-build contractor must analyze the contract to determine whether the additional work **constituted a change in the contract's** requirements.

A <u>change order</u> is a written amendment to the terms and conditions of the contract that may be issued to modify the scope of work, revise a completion deadline, revise the price, and/or revise other contract terms and conditions.

Source: The Department

issued. That could increase the risk of the design-build contractor completing a substantial amount of work pursuant to a directive letter that is not ultimately approved by the Department through the execution of a change order.

The Department did not adequately review the accuracy and completeness of the supporting documentation for one change order for the Energy Sector Roadway Repair project. Specifically, that change order did not include detailed support for the subcontractor's cost quote that the design-build contractor used as the starting basis for calculating the final amount of the change order. That change order resulted in a deduction of \$1,669,912.68 from the contract amount.

#### Recommendation

The Department should document and implement comprehensive procedures to establish a uniform process for reviewing, approving, and executing change orders for all design-build projects to ensure that change order request forms are (1) complete and consistently include sufficient detailed support and (2) executed in a timely manner.

#### Management's Response

TxDOT agrees with the recommendations and is developing the policies and procedures for change orders. These procedures will be implemented jointly with the districts.

Person Responsible: Director, Project Finance, Debt and Strategic Contracts
Division

Target Date: March 31, 2017

Chapter 2-C

The Department Generally Approved and Supported Changes in Key Personnel, as Required; However, It Should Improve Its Oversight of Key Deliverables for Design-build Projects

Chapter 2-C Rating: Low <sup>17</sup> Auditors examined other aspects of the Department's oversight of the construction of design-build projects, including the Department's approval of changes to key personnel, monitoring of quality control activities, and completion and acceptance process.

Key Personnel

All three of the contracts for the design-build projects audited contained provisions that defined a group of contractor employees/roles as "key personnel" (see Table 6 on the next page). The Department considers the qualifications and experience of the key personnel when evaluating the contractors' qualifications statements.

<sup>&</sup>lt;sup>17</sup> The risks related to the issues discussed in Chapter 2-C are rated as Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Table 6

| Changes in Key Personnel/Positions as of March 11, 2016 |                               |  |  |   |
|---|-------------------------------|--|--|---|
| Design-build<br>Projects <sup>a</sup>                   | Number of<br>Key<br>Personnel | Number of<br>Changes to Key<br>Personnel | Percentage of<br>Changes to Key<br>Personnel | Percentage of<br>Changes to Key<br>Personnel<br>Approved by the<br>Department |
| US 181 Harbor<br>Bridge Replacement                     | 19                            | 9 <sup>b</sup>                           | 47.4%  | 100%  |
| Energy Sector<br>Roadway Repair                         | 6                             | 2  | 33.3%  | 100%  |
| IH35-E (Managed<br>Lanes)                               | 13                            | 8  | 61.5%  | 100%  |

<sup>&</sup>lt;sup>a</sup> The SH 99 (Grand Parkway) Segments H, I-1, and I-2 project was in the procurement phase at the time of this audit

Source: Department documentation.

Proposals must contain a signed commitment from the contractor to keep each of the identified key personnel active in their roles throughout the project. In addition, during the project, the contractor must obtain written permission from the Department before replacing those individuals.

Auditors determined that contractors' approved key personnel were actively involved for the three audited design-build projects with executed contracts. Additionally, appropriate Department personnel approved all the changes to contractors' key personnel on the three design-build projects audited. However, the Department did not always approve changes to key personnel in a timely manner. The design-build contractor on the IH35-E (Managed Lanes) project submitted its request for a change in key personnel in a timely manner, but the Department did not approve that change until eight months later. Failing to approve a request in a timely manner increases the risk of work being completed by an individual whom the Department does not consider to be sufficiently qualified or experienced for a key position.

<sup>&</sup>lt;sup>b</sup> While there were 10 total changes to key personnel, the person filling one key role was replaced twice.

<sup>&</sup>lt;sup>18</sup> The SH 99 (Grand Parkway) Segments H, I-1, and I-2 project was in the procurement phase at the time of this audit; therefore, no contract had been awarded.

#### Monitoring of Quality Control

The Department did not consistently require the design-build contractors to document and submit quality control deliverables required by the contract provisions. For example, the lead quality manager for the IH35-E (Managed

## The Completion and Acceptance Process

Substantial Completion - Substantial completion occurs when the Department issues the contractor a written certificate of substantial completion for a section of the project or the project as a whole. The Department will issue the certificate when the contractor has completed the work to the point that the project, or a portion of the project, can be used for normal and safe vehicular travel.

Final Acceptance - The Department will provide the contractor with a certificate of final acceptance once it has verified that all work has been completed; it has received a complete set of record drawings; all utility work is completed and accepted by third parties; and all contractor personnel, equipment, and debris have been removed from the site.

Source: The Department.

Lanes) project prepared monthly reports of quality inspections and tests performed. However, the design-build contractor's construction quality control manager for the Energy Sector Roadway Repair project did not submit the monthly reports of the quality inspections and tests performed, results of such inspections and tests, and occurrence and resolution of noncompliance discoveries.

Completion and Final Acceptance

Of the four audited projects, only the Energy Sector Roadway Repair project was complete as of June 2016. Auditors examined 5 of the 30 roadway segments repaired during the Energy Sector Roadway Repair project and determined that the Department adequately monitored the processes related to substantial completion and final acceptance.

#### Recommendations

#### The Department should:

- Ensure that it reviews and approves requests for changes to key personnel in a timely manner.
- Require design-build contractors to document and submit all required quality control deliverables.

#### Management's Response

TxDOT agrees with the recommendations and will provide training to District Project Managers by incorporating guidelines for reviewing and approving key personnel changes in a timely manner and emphasizing the oversight responsibilities for contractually required quality control monitoring into the revised Design Build Project Implementation Handbook. A notification will be provided to all District Project Managers and independent records verification audits will be performed to ensure all required quality control deliverables are being documented and submitted.

| Person Responsible: Director, Project Finance, Debt and Strategic Contracts<br>Division |
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| Target Date: March 31, 2017   |
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## **Appendices**

Appendix 1

### Objective, Scope, and Methodology

#### Objective

The objective of this audit was to determine whether the Department of Transportation (Department) administered certain design-build contract management functions in accordance with policies, procedures, and other applicable requirements, including:

- Establishment of formal and consistent processes to guide project and contractor selection.
- Negotiation of contract provisions.
- Selection of projects and procurement of contracts.
- Contract management, including change order management and enforcement of contract provisions.
- Evaluation of project expenses and outcomes.

#### Scope

The scope of the audit covered design-build projects that the Department had procured or for which it had started the procurement process between September 1, 2012, and February 29, 2016. The following four design-build contracts were selected for testing:

- Energy Sector Roadway Repair project.
- IH35-E (Managed Lanes) project.
- US 181 Harbor Bridge Replacement project.
- SH 99 (Grand Parkway) Segments H, I-1, and I-2 Project.

#### Methodology

The audit methodology included collecting and reviewing the Department's planning and procurement documentation; reviewing and testing the Department's contract draw request 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 contracts audited.

Sample Selection

For most of the sample selections below, auditors applied a nonstatistical, judgmental methodology. The sample items generally were not representative of the entire population and, therefore, it would not be appropriate to extrapolate results to the population. Auditors selected the following samples:

- To test the Department's design-build contracts, auditors used professional judgment to select four design-build contracts based on contract dollar amount, the total number of change orders, and risks identified during the audit planning process.
- To test the payments of draw requests, auditors used professional judgment to select 9 (15.8 percent) of 57 total draw requests for 3 of the 4 projects audited. Auditors selected those draw requests primarily based on their large dollar amounts and other considerations identified in the details of the draw requests, including negative line item amounts and handwritten revisions.
- To test change orders, auditors used professional judgment to select 20 (15.6 percent) of 128 total change orders for 2 design-build contracts audited. Auditors selected those change orders primarily based on their large absolute dollar amounts and the breadth of coverage provided in terms of the types and subject matter of the change orders.
- To test design submittal packages, auditors used professional judgment to select 14 (15.2 percent) of 92 total design submittal packages for the IH35-E (Managed Lanes) project. Auditors selected the design submittal packages to provide coverage of the four major components of the IH35-E (Managed Lanes) project and to provide coverage of a variety of types of designs (bridges, underpasses, overpasses, full civil works, and maintenance of traffic).
- To test changes to key personnel, auditors reviewed all changes to the key personnel for each of the three sampled design-build contracts. In addition, auditors used professional judgment to select a sample of eight key personnel required to sign draw requests for those design-build projects.
- To test project close-out for the Energy Sector Roadway Repair project, auditors selected a random sample of 5 roadway segments from the population of 31 roadway segments listed in the contract.

#### Data Reliability

Auditors assessed the reliability of the electronic copies of certain documents stored in SharePoint, which is an electronic document management system the Department used to manage the procurement documentation for some design-build projects audited. That assessment included (1) reviewing password rules and audit trail functions and (2) reviewing access to project-specific working groups to determine whether access was appropriately restricted. However, the Department did not retain all documentation related to the projects audited; as a result, auditors also relied on the Department's assertions that it provided all available documentation in response to auditors' requests.

Auditors also assessed the reliability of expenditure data, including data from the Department's legacy financial accounting system (Financial Information Management System, or FIMS) and its current financial accounting system (PeopleSoft). That assessment included (1) observing as data was extracted from the system, (2) reviewing the associated query for appropriateness, and (3) conducting a review of files to determine content and completeness.

Additionally, auditors assessed the reliability of certain data in the Primavera 6 system, which is a project management tool the Department uses. Specifically, auditors assessed the automated approvals for project baseline schedules, progress schedules, and payment amounts. That assessment included (1) conducting a walkthrough of the Primavera 6 system with Department personnel, (2) reviewing the data entry process, and (3) reviewing reports generated from the Primavera 6 system.

Auditors determined that the documentation in SharePoint and the data in FIMS, PeopleSoft, and the Primavera 6 system was sufficiently reliable for the purposes of this audit.

#### Information collected and reviewed included:

- Department policies and procedures, including draft policies and procedures, and individual project evaluation manuals.
- Department procurement files, including draft and final requests for qualifications, draft and final requests for proposals, corresponding addenda, proposer qualifications submittals and proposals, alternative technical concept documentation, individual scoring worksheets, consensus qualitative rating forms, project training sign-in sheets, confidentiality agreements, conflict disclosure statements, minute orders, question-and-answer matrices, price proposals, qualifications statements evaluation criteria, proposal evaluation criteria, and other supporting documentation.

- Department contract management files, including draw request and expenditure data, change orders, construction "punch lists," key personnel information, and change order documentation.
- Uniform Statewide Accounting System vendor payment data and vendor information.
- Emails and other documentation that supported information that Department employees provided during interviews.

## Procedures and tests conducted included the following:

- Interviewed Department employees.
- Reviewed all available individual scoring worksheets, consensus qualitative rating forms, training sign-in sheets, confidentiality agreements, conflict disclosure statements, minute orders, qualifications statements, proposals, and evaluation criteria to test the Department's procurement process for design-build projects.
- Reviewed the addenda to requests for qualifications, requests for proposals, and the question-and-answer matrices to test the Department's processes for approving and issuing addenda.
- Reviewed a sample of draw requests to determine whether they were adequately supported, contained all required items, approved appropriately, calculated accurately, and within the maximum payment curve (which is a limit on the total amount payable to a contractor at any point in time during a project).
- Reviewed a sample of change orders to determine the change orders' effect on the contract amount and whether the change orders were reasonable, approved appropriately, supported, and complied with contract requirements.
- Reviewed a sample of design submittal packages to determine whether the Department concurred with the final design submittal packages and concurred with any changes to the final design submittal packages after they were released for construction.
- Reviewed a sample of draw requests to verify the participation of key personnel on each project.
- Reviewed samples of deliverables to evaluate the Department's monitoring and project close-out processes.

## <u>Criteria used</u> included the following:

- Final executed contracts between the Department and contractors for the IH35-E (Managed Lanes) project, the US 181 Harbor Bridge Replacement project, and the Energy Sector Roadway Repair project.
- Texas Government Code, Chapters 2155, 2156, and 2261.
- Texas Transportation Code, Chapter 223.
- Title 43, Texas Administrative Code, Chapters 9 and 27.
- The General Appropriations Acts (82nd, 83rd, and 84th Legislatures).
- Title 23, United States Code, Chapters 101 and 112.
- Title 23, Code of Federal Regulations, Chapter 636.
- AASHTO Guide for Design-Build Procurement, the American Association of State Highway and Transportation Offices, June 2008.
- Department policies, procedures, project-specific evaluation manuals, and other guidance.

## Project Information

Audit fieldwork was conducted from April 2016 through May 2016. 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:

- Justin H. Griffin, CISA (Project Manager)
- Gregory Scott Adams, MPA, CPA, CGFM (Assistant Project Manager)
- Valeria Aguirre, MPA
- Isaac Barajas
- Nathan Beavers
- Adam Berry, MS
- Robert H. (Rob) Bollinger, CPA, CFE

- Robert P. Burg, MPA, CPA, CFE
- Anca Pinchas, CPA, CISA, CIDA
- Bianca F. Pineda, CGAP
- Sherry Sewell, CGAP
- J. Scott Killingsworth, CIA, CGAP, CGFM (Quality Control Reviewer)
- Verma L. Elliott, CPA, CIA, CGAP, MBA (Assistant State Auditor)

Auditors used professional judgement and rated the audit findings identified in this report. Those issue ratings are summarized in the report chapters/sub-chapters. The issue ratings were determined based on the degree of risk or effect of the findings in relation to the audit objective(s).

In determining the ratings of audit findings, auditors considered factors such as financial impact; potential failure to meet program/function objectives; noncompliance with state statute(s), rules, regulations, and other requirements or criteria; and the inadequacy of the design and/or operating effectiveness of internal controls. In addition, evidence of potential fraud, waste, or abuse; significant control environment issues; and little to no corrective action for issues previously identified could increase the ratings for audit findings. Auditors also identified and considered other factors when appropriate.

Table 7 provides a description of the issue ratings presented in this report.

Table 7

| Summary of Issue Ratings |  |  |  |
|--------------------------|--|--|--|
| Issue Rating             | Description of Rating  |  |  |
| Low                      | The audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.                |  |  |
| Medium                   | Issues identified present risks or effects that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern(s) and reduce risks to a more desirable level.   |  |  |
| High                     | Issues identified present risks or effects that if not addressed could substantially affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern(s) and reduce risks to the audited entity.  |  |  |
| Priority                 | Issues identified present risks or effects that if not addressed could <a href="mailto:critically affect">critically affect</a> the <b>audited entity's</b> ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern(s) and reduce risks to the audited entity. |  |  |

# The Department's Design-build Projects

From September 2012 through February 2016, the Department of Transportation (Department) had procured, or was in the process of procuring, 12 projects using the design-build method, with a total estimated capital cost of \$8.0 billion. Design-build projects are projects for which the Department contracts with a single entity to both design and construct a road project. Texas Transportation Code, Chapter 223, authorizes the Department to use the design-build method by entering into design-build contracts and comprehensive development agreements.

## Design-build Contracts

The Department may use design-build contracts to construct or repair highway projects. The Department may not grant a private entity the right to a leasehold interest, to operate, or to retain revenue from a toll road project under a design-build contract. The Department is permitted to enter into maintenance agreements with a design-build contractor. The Department may not enter into more than three design-build contracts each fiscal year. Design-build contracts must have a construction cost that exceeds \$150 million. Table 8 lists the Department's design-build contracts and the status of the associated highway projects as of February 29, 2016. The 8 contracts listed had a total estimated capital cost of \$3.2 billion.

Table 8

| Department Design-build Projects<br>From September 2012 Through February 29, 2016 |                        |                             |   |  |  |  |  |
|---|------------------------|-----------------------------|---|--|--|--|--|
| Project Name  | Location               | Contract Fiscal<br>Year     | Status  | Estimated<br>Capital Cost<br>(in millions) |  |  |  |
| Horseshoe Project   | Dallas                 | 2013                        | Construction  | \$ 804.1                                   |  |  |  |
| US 77   | Kingsville/Driscoll    | 2013                        | Construction  | 84.2                                       |  |  |  |
| Loop 1604 Western<br>Extension  | San Antonio            | 2014                        | Construction  | 125.6                                      |  |  |  |
| Energy Sector<br>Roadway Repair   | South Texas            | 2014                        | Completed in<br>November 2015                         | 150.0                                      |  |  |  |
| State Highway 71 Toll<br>Lanes  | Austin                 | 2014                        | Construction  | 145.0                                      |  |  |  |
| State Highway 360   | Ellis/Tarrant Counties | 2015                        | Construction  | 323.9                                      |  |  |  |
| SH 99 (Grand Parkway)<br>Segments H, I-1, and<br>I-2                              | Houston                | Not Applicable <sup>a</sup> | Procurement<br>(Issued a<br>Request for<br>Proposals) | 1,227.0                                    |  |  |  |

<sup>&</sup>lt;sup>19</sup> House Bill 20 (84th Legislature, Regular Session) increased the original limit of \$50 million to the current \$150 million limit. That legislation also prohibited the Department from including more than one project in a design-build contract.

| Department Design-build Projects<br>From September 2012 Through February 29, 2016   |                                   |                             |   |  |  |  |
|---|-----------------------------------|-----------------------------|---|--|--|--|
| Project Name  | Location                          | Contract Fiscal<br>Year     | Status  | Estimated<br>Capital Cost<br>(in millions) |  |  |
| State Highway 249<br>Controlled-Access<br>Tollway Extension   | Grimes and Montgomery<br>Counties | Not Applicable <sup>a</sup> | Procurement<br>(Issued a<br>Request for<br>Proposals) | 390.1                                      |  |  |
|   |                                   |                             | Total Costs   | \$3,249.9                                  |  |  |
| <sup>a</sup> The project was still in the procurement stage and, therefore, there was not a contract as of February 2016. |                                   |                             |   |  |  |  |

Source: The Department.

Comprehensive Development Agreements

The Department may use the design-build methodology in comprehensive development agreements that do not include financing. The Department may use comprehensive development agreements only to build projects listed in Texas Transportation Code, Chapter 223, Subchapter E. The Department's authority to develop those projects expires on August 31, 2017, in most cases. Table 9 lists the Department's four comprehensive development agreements that use the design-build method and the status of the associated highway projects. The four projects listed had a total estimated capital cost of \$4.8 billion.

Table 9

| The <b>Department's Comprehensive Development Agreements</b> That Use the Design-build Method From September 2012 Through February 29, 2016 |                |                         |                           |   |  |  |  |
|---|----------------|-------------------------|---------------------------|---|--|--|--|
| Project Name  | Location       | Contract Fiscal<br>Year | Status                    | Estimated Capital<br>Cost (in millions) |  |  |  |
| State Highway 99<br>(Grand Parkway)<br>Segments F1, F2, and<br>G  | Houston        | 2013                    | Substantial<br>Completion | \$1,451.9                               |  |  |  |
| IH35-E (Managed<br>Lanes)   | Dallas/Denton  | 2013                    | Construction              | 1,361.0                                 |  |  |  |
| State Highway 183<br>Managed Lanes<br>(Midtown Express)   | Dallas/Irving  | 2015                    | Construction              | 1,013.3                                 |  |  |  |
| US 181 Harbor Bridge<br>Replacement   | Corpus Christi | 2016                    | Design                    | 970.0                                   |  |  |  |
|   |                |                         | Total Costs               | \$4,796.2                               |  |  |  |

Source: The Department.

# **Additional Information Related to the Department's Design**-build Procurement Process

The Department of Transportation (Department) uses the design-build project delivery method for some highway construction projects. The design-build method combines both project design and construction under one contract. According to some academic research<sup>20</sup> and research by the Federal Highway Administration,<sup>21</sup> the primary advantage to design-build contracting is that it is significantly faster than the traditional procurement methods for highway projects.

The Texas Transportation Code authorizes the Department to use the designbuild method on design-build contracts and comprehensive development agreements and outlines a competitive process for selecting design-build contractors to provide the best value to the State.

Design-build Contracts - Texas Transportation Code, Chapter 223, Subchapter F, authorizes the Department to enter into three design-build contracts with estimated costs of \$150 million or more per fiscal year. Those contracts may be with a single entity to provide both design and construction services for the construction, rehabilitation, alteration, or repair of a facility. A design-build contract may not grant to a private entity (1) a leasehold interest in the highway project or (2) the right to operate or retain revenue from the operation of a toll project. In addition, the 84th Legislature prohibited the Department's design-build contracts from including more than one highway project. That statutory change became effective June 3, 2015 and did not affect any of the contracts reviewed in this audit.

Comprehensive Development Agreements - Texas Transportation Code, Chapter 223, Subchapter E, authorized the Department to enter into a comprehensive development agreements for 12 specific highway projects, which can be constructed using the design-build method. For those 12 projects, the Department may enter into a comprehensive development agreement with a private entity to design, develop, finance, construct, maintain, repair, operate, extend, or expand a:

- Toll project.
- State highway improvement project that includes both tolled and nontolled lanes and may include nontolled facilities.

<sup>&</sup>lt;sup>20</sup> "Performance Comparison of Large Design-Build and Design-Bid-Build Highway Projects," *Journal of Construction Engineering and Management*, (Volume 138, No. 1) January 1, 2012.

<sup>&</sup>lt;sup>21</sup> Design-Build Effectiveness Study, Final Report, Federal Highway Administration, January 2006.

- State highway improvement project in which the private entity has a financial interest in the project.
- State highway improvement project financed wholly or partly with the proceeds of private activity bonds.

Texas Transportation Code, Chapter 223, Subchapter E, also gives the Department or the regional mobility authority in which the project is located limited authority to enter into a comprehensive development agreement regarding improvements or construction of all or part of nine other projects. Authority for all 21 projects will expire on or before August 31, 2017, in most cases.

Two-step Procurement Process

The Department's procurement process for design-build projects is a twostep procurement process. The objective of design-build procurements is to identify the contractor offering the best value, rather than the contractor offering the lowest price.

Figure 1 shows the Department's two-step procurement process for designbuild projects, which includes review and approval by several committees, the Department's executive director, and the Texas Transportation Commission.

Two-step Procurement Process

for Design-build Projects

Two-step Procurement Process

Step #1
Qualification and
Shortlist (Request for Qualifications (RFQ))

Step #2
Proposal
Development and
Evaluation (Request for Proposals (RFP))

Figure 1

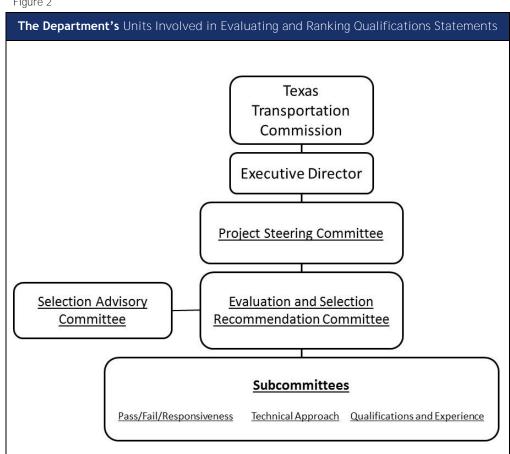
Source: Auditors created this figure based on information from the Department.

#### **Qualifications Statement**

A qualifications statement is a structured list of a design-build contractor's qualifications, such as project experience, technical qualifications, safety qualifications, and financial information. The contractor submits a qualifications statement to the Department in response to a request for qualifications for a designbuild project. The Department evaluates and competitively ranks the qualifications statements to establish a shortlist of design-build contractors that are eligible to receive the request for proposals. Source: The Department.

The Department publishes a request for qualifications (RFQ) to request qualifications statements from interested contractors (see text box). After receiving the qualifications statements, several committees and subcommittees perform evaluations of them independently of other committees. Figure 2 shows the committees that evaluate and rank the qualifications statements and shortlisting the contractors.

Figure 2



Source: The Department.

The following committees and subcommittees are involved in the process for evaluating the qualifications statements, ranking the responses, and shortlisting the contractors:

- Pass/Fail/Responsiveness Subcommittee. Members review the qualifications statements to ensure that all required information and forms are included and that the qualifications statements meet the minimum qualifications in the RFQ.
- Technical Approach Subcommittee. Members review and analyze the qualifications statements to provide qualitative evaluations of each proposer's understanding of the risks and potential solutions associated to the design(s), construction, and maintenance of the proposed project.
- Qualifications and Experience Subcommittee. Members analyze the
  qualifications statements to provide qualitative evaluations based on a
  proposer and its key personnel demonstrating the requisite qualifications
  and experience to successfully manage and construct the proposed
  project.
- Selection Advisory Committee. Members assist with the receipt of qualifications statements and assist the evaluation and selection recommendation committee with the development of the qualifications statement criteria point assignments and qualitative score weighting.
- Evaluation and Selection Recommendation Committee. Members review the qualifications statements, review the subcommittee chairs' consensus evaluations, and issue a qualitative consensus score. The committee converts the consensus score into a numerical score using the predetermined criteria points and qualitative score weighting, determines the qualification statement scores, and develops the shortlist recommendations.
- Project Steering Committee. Members review and analyze the evaluation and selection recommendation committee's numerical scores and the recommended shortlist. The project steering committee may require further review of criteria or recommendations from the evaluation and selection recommendation committee, but it may not change or influence criteria or overall qualifications statement scores. The project steering committee may then approve the shortlist for action by the Department's executive director and the Texas Transportation Commission.

### Step 2: Evaluation Process for the Proposals

To obtain proposals for design-build projects, the Department develops and issues a request for proposals (RFP) to the shortlisted contractors from the qualifications statements.

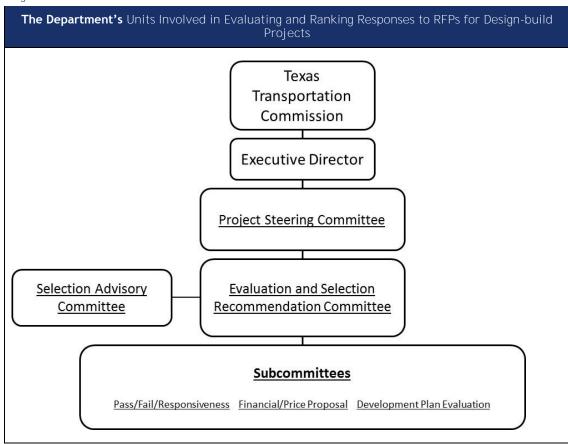
Alternative Technical Concepts. As a component of the design-build project delivery method, short-listed contractors can submit alternative technical concepts that serve as requests to deviate from the requirements in the RFP. The Department uses the following process for evaluating the alternative technical concepts:

- The Department has a group of committees evaluate the alternative technical concepts.
- Department management informs the contractors about which alternative technical concepts it will accept in advance of the due date for proposals.
- For an alternative technical concept accepted by the Department, the contractor can integrate the concept into its technical proposal, potentially affecting the proposal's overall price.

After the Department selects a contractor for a project, the Department can then consider incorporating ideas from all of the alternative technical concepts submitted. Department personnel from the district in which the project is to be located make the final decision on which alternative technical concepts are included in the contract.

Evaluating Proposals. After proposers submit their proposals, the Department uses an organization structure to evaluate those proposals that is similar to the structure used to evaluate the qualifications statements. Figure 3 shows the Department's process for evaluating proposals for design-build projects.

Figure 3



Source: The Department.

The Department separates the proposals between price and the technical portions. Information that identifies each proposer is removed from the price proposals to "blind" them to evaluators.

The following committees and subcommittees are involved in the process for evaluating the proposals, ranking the responses, and identifying the proposal that offers the best value:

 Pass/Fail/Responsiveness Subcommittee. Members evaluate contractors' proposals for compliance with the request for proposals submission requirements.

- Financial/Price Proposal Subcommittee. Members evaluate the blinded price proposals using the mathematical evaluation formula that is included in the RFP. Texas Transportation Code, Section 223.246, requires that the score for the cost proposal account for at least 70 percent of the proposal's total score.
- Development Plan Evaluation subcommittee. Members evaluate the technical portion of each proposal. The technical portion can include project design and the construction plan, the construction schedule, and the proposer's quality plan.
- Selection Advisory Committee. Members serves as a resource to all the other committees. The selection advisory committee assists the evaluation and selection recommendation committee in developing qualitative ratings for scoring the proposals.
- Evaluation and Selection Recommendation Committee. After the committees and subcommittees evaluate the proposals, they present their consensus ratings to the evaluation and selection recommendation committee, which may use the consensus ratings or choose to use its own ratings. It then converts the individual evaluations into numerical scores.
- Project Steering Committee. Members review and analyze the evaluation and selection recommendation committee's numerical proposal scores. The project steering committee then recommends the best value proposal for conditional award to the Department's executive director, and then the Department makes recommendations to the Texas Transportation Commission.

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
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The Honorable Robert Nichols, Member, Texas Senate
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The Honorable Greg Abbott, Governor

# Department of Transportation

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