



An Audit Report on

Bridge Project Oversight at the Department of Transportation

- The Department's owner verification firm for the Southeast Connector project did not always retest construction materials as required, include key information in inspection reports, or report the results of those activities in a timely manner.
- The Department appropriately tested construction materials for the Widen Freeway I35 project; however, it did not always include all required key information in inspection reports.
- For the Southeast Connector and Widen Freeway I35 projects, the Department appropriately paid its contractors and processed change orders.

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State Auditor

The Department of Transportation (Department) had processes and related controls to ensure that the Widen Freeway I35 project was administered in accordance with applicable requirements. However, its oversight process for the Southeast Connector project had weaknesses that could delay identifying and addressing construction deficiencies.

- [Background](#) | p. 3
- [Audit Objective](#) | p. 14

This audit was conducted in accordance with Texas Government Code, Sections 321.013 and 321.0132.

HIGH

SOUTHEAST CONNECTOR

The Department made contract payments, processed a change order, and issued nonconformance reports as required. However, it did not adequately oversee inspections or retesting of construction materials.

[Chapter 1 | p. 6](#)

MEDIUM

WIDEN FREEWAY I35

The Department made contract payments, processed change orders, and performed construction materials testing and inspections as required, but its inspection reports were missing some key information.

[Chapter 2 | p. 12](#)

For more information about this audit, contact Audit Manager Jeannette Garcia or State Auditor Lisa Collier at 512-936-9500.

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Summary of Management's Response

Auditors made recommendations to address the issues identified during this audit, provided at the end of each chapter in this report. The Department agreed with the recommendations.

Ratings Definitions

Auditors used professional judgment and rated the audit findings identified in this report. The issue ratings identified for each chapter were determined based on the degree of risk or effect of the findings in relation to the audit objective(s).

PRIORITY: 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(s) and reduce risks to the audited entity.

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.

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

LOW: The audit identified strengths that support the audited entity's ability to administer the program(s)/function(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.

For more on the methodology for issue ratings, see [Report Ratings](#) in Appendix 1.

Background Information

Types of Bridge Construction Projects

The Department of Transportation (Department) has two types of construction projects: design-build (DB) and design-bid-build (DBB). Most of the Department’s active construction projects that include bridges are classified as DBB projects (see Figure 1).

Figure 1

Active Bridge Construction Projects as of July 1, 2024 ^a

	DB Projects	DBB Projects
Total Cost ^a	\$8,496,334,639	\$29,383,141,368
No. of Projects ^b	8	791
^a Total cost for construction projects with bridges.		
^b Count of construction projects with bridges.		

Source: The Department.



DB Projects (Chapter 1)

In DB projects, the Department outsources the project to a single contractor that is responsible for both design and construction. The contractor hires an independent quality firm (IQF) to perform inspections and testing of construction materials in accordance with the Department’s quality assurance program for construction projects. The quality assurance program specifies the Department’s requirements for materials and workmanship.

The Department hires an owner verification firm (OVF) to oversee the IQF’s work through periodic reviews of personnel, equipment, and operations, ensuring compliance with the contract. The OVF performs materials testing and daily inspections of the IQF’s work.

OVF Materials Testing. The Department’s quality assurance program requires testing of materials that will be used in the construction at required frequencies:

- **Level 1 materials** are required to be tested at the higher of either 10 percent of IQF’s testing frequency or three times per quarter.
- **Level 2 materials** are required to be tested at least 3 times per quarter.

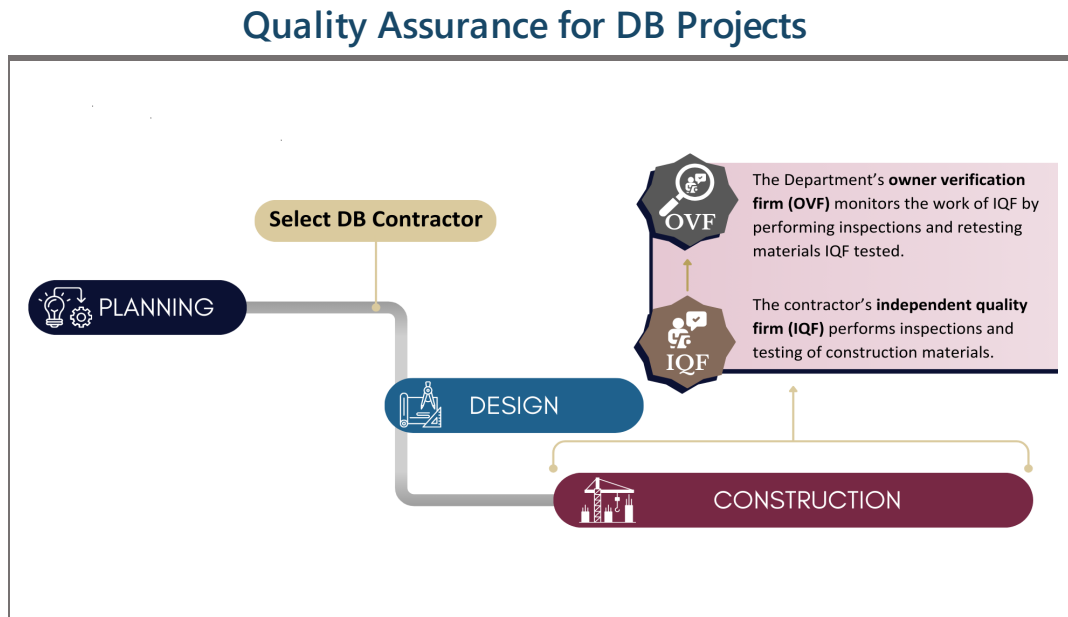
OVF Daily Inspections. The Department’s quality assurance program also requires the OVF to verify samples of IQF inspections using a risk-based approach at required frequencies depending on the type of construction activity.

Any work or materials that do not meet Department’s minimum requirements are documented in a non-conformance report, and the Department withholds payment from the contractor for those items until the deficiency is remediated or is otherwise accepted by the Department.

The Southeast Connector, which is discussed in Chapter 1, is a DB project in the Fort Worth area that started construction on March 27, 2023, and is scheduled to be completed on June 25, 2028. As of January 2025, the project was expected to cost approximately \$2.0 billion.

Figure 2 shows the Department’s quality assurance program for DB projects.

Figure 2



Source: Information provided by the Department.



DBB Projects (Chapter 2)

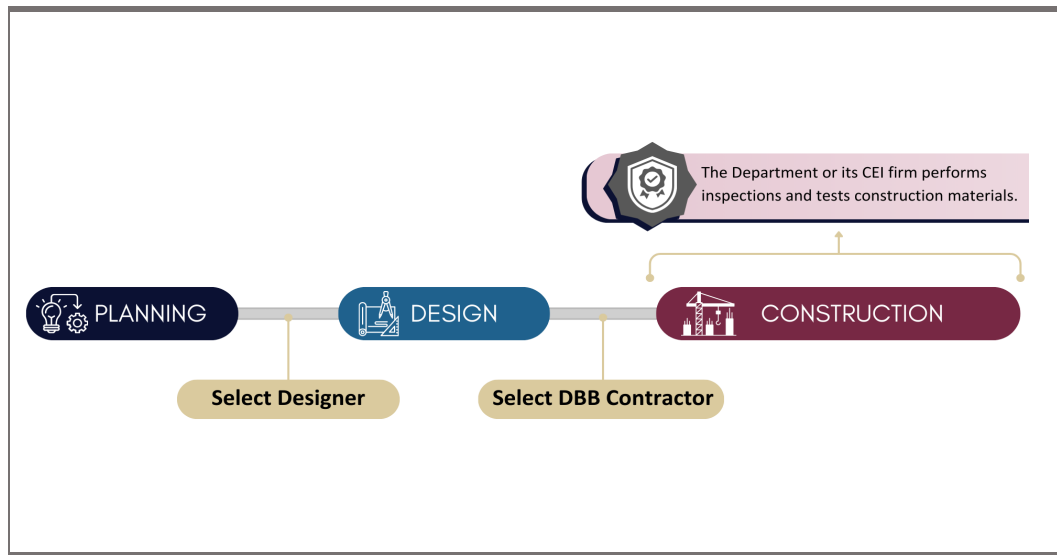
In DBB projects, the Department approves the design prior to selecting a contractor for construction. The Department oversees the verification sampling, testing, and inspections of the contractor’s work to ensure that it meets project specifications. The Department may hire a construction engineering inspection (CEI) firm to perform these tasks.

The Widen Freeway I35, which is discussed in Chapter 2, is a DBB project in the Austin area that started construction on March 6, 2023, and is scheduled to be completed on August 7, 2028. As of January 2025, the project was expected to cost approximately \$553.6 million.

Figure 3 shows the Department’s quality assurance program for DBB projects.

Figure 3

Quality Assurance for DBB Projects



Source: Information provided by the Department.



HIGH

Chapter 1 Southeast Connector



The Department of Transportation (Department) made all 25 payments from April 2022 to July 2024, totaling \$604,570,297, for the Southeast Connector project in accordance with applicable requirements. In addition, 1 change order, which reduced the contract amount by \$809,035, was properly approved and supported, and all 17 non-conformance reports tested were documented, approved, and reported to the Department as required.

However, the Department did not approve and implement its monitoring plan for its owner verification firm (OVF) in a timely manner, and it did not ensure that the firm performed and reported its inspections and retesting of materials as required. Without these quality assurance activities, the Department might not be able to identify and address construction deficiencies, possibly compromising project funding and infrastructure safety.

The Department did not approve its monitoring plan for its owner verification firm before construction began.



Monitoring Plan. The Department did not put its Owner Verification, Testing, and Inspection Plan (Plan) in place for its OVF prior to the start of construction, as required by the Department's Design-Build Quality Assurance Program. The Plan is used to verify compliance with that program by providing procedures for materials testing, including testing frequencies, and guidelines for conducting inspections. However, the Department did not approve and implement the Plan for the Southeast Connector project until 24 days after construction started.

Not having an approved Plan in place before construction begins could result in materials tests and inspections being missed or inadequately performed and could impair the Department's ability to hold the construction contractor accountable for its work.

The Department did not ensure that its owner verification firm's testing and inspections were conducted and reported as required.



OVF Materials Testing. The Department's OVF performs inspections and retests certain construction materials tested by the contractor's independent quality control firm and presents results in quarterly reports. However, the OVF did not always retest materials at the frequency required by the Design-Build Quality Assurance Program in any of the four quarterly reports reviewed. Specifically:

- 14 (13 percent) of 104 categories of level 1 materials in those quarterly reports did not meet the minimum testing requirements.
- 37 (11 percent) of 323 categories of level 2 materials in those quarterly reports did not meet the minimum testing requirements.

In addition, the OVF did not submit three of the four quarterly materials testing reports to the Department within the required timeframes. The reports were submitted between 30 and 62 days late.

OVF Daily Inspections. The Department did not ensure that the OVF always performed and documented its inspections of the contractor's independent quality control firm as required by the Plan. The OVF did not consistently document that (1) the construction activities it monitored were selected based on risk and (2) monitoring was performed at the required frequency in its daily inspection reports. Specifically:

- 20 (57 percent) of 35 daily inspection reports tested did not include adequate documentation to determine whether these inspections were selected based on risk.
- 19 (54 percent) of 35 daily inspection reports tested did not include adequate documentation to determine whether the OVF performed inspections at the required frequency.

In addition, 15 (43 percent) of 35 daily inspection reports tested did not include key information such as weather, date, company name, and location. Two of those daily inspection reports did not include any key information, only photos of the construction activities observed.

Without ensuring that the OVF performs inspections and retesting of materials and documents the results of those activities as required, the Department risks not detecting material or construction deficiencies that could compromise the safety and durability of the infrastructure.



IQF Daily Inspections. The contractor's independent quality control firm (IQF) performed the required inspections and construction material tests and had the required approvals for all 37 daily inspection reports tested. However, the IQF did not always include all required information in those reports, and it did not make those reports available to the Department within the required timeframes. Specifically:

- 13 (35 percent) of 37 daily inspection reports tested were missing key information such as weather and location.
- 32 (86 percent) of 37 daily inspection reports tested were not submitted to the Department within 48 hours after the inspector's work shift, as required by the contract.

Not having key information from the IQF's daily inspection reports limits the Department's ability to verify that construction activities and related inspections were performed as required. Late submission of daily inspection reports increases the likelihood the Department will not identify construction issues and hold the contractor accountable in a timely manner.

Recommendations

The Department should:

- Approve and implement the Owner Verification, Testing, and Inspection Plan prior to the start of each construction project in accordance with its policies.
- Implement procedures for monitoring and documentation of owner verification firm activities so all required materials testing and inspections are performed on schedule, based on risk requirements, and documented accurately.
- Enforce its policies and require the contractor's independent quality control firm to submit daily inspection reports on time with all required information.

Management's Response

Recommendation 1: The Department should approve and implement the Owner Verification, Testing, and Inspection Plan (OVTIP) prior to the start of each construction project in accordance with its policies.

Views of responsible officials: The Department acknowledges and agrees with the finding of the SAO Audit. The coordination for OVTIP approval started in August 2022 after the Construction Quality Management Plan (CQMP) was approved. The revisions and review of revisions took longer than expected which resulted in the OVTIP being approved 24 days after the Commencement of Construction. The Project team was aware of the daily work activities through the daily Play of the Day (POTD) meeting held by the Design-Build (DB) Contractor. All mix designs were reviewed and approved for use on the project. All the materials were on the Material Producer List (MPL). Independent Quality Firm (IQF) continued with the testing and inspection as part of the Quality Assurance Role.

Corrective action plan: A project checklist will be developed for future projects to ensure the OVTIP is approved before the DB project nears Commencement of Construction to ensure the work can be adequately tested and inspected.

Implementation date: This checklist can be developed by TxDOT's Alternative Delivery Division (ALD) by April 30th, 2025.

Responsible Persons: Alternative Project Delivery Supervisor, Fort Worth District

Recommendation 2: The Department should implement procedures for monitoring and documentation of Owner Verification Firm (OVF) activities so all required materials testing, and inspections are performed based on risk requirements, accurately, and on schedule.

Views of responsible officials: The Department acknowledges and agrees with the finding of the SAO Audit. OVF Materials Testing: 13% of Level 1 materials testing met the more than 10% of the IQF testing frequencies. OVF missed 6 tests, this occurred due to OVF not being notified of the materials being placed on the day. OVF also missed tests on Level 2 due to scheduling issues from the DB Contractor. All tests

met the 10% of IQF testing frequencies. This has since been addressed with the DB Contractor to ensure all information are included on the POTD sheets. Any changes to the work are relayed through the POTD emails and text messages to the technicians. All missed tests are noted on the Quarterly Reports as well.

The Department acknowledges that OVF did not submit the signed report to the Project team per the project's approved OVTIP. However, all reports were submitted within the 60 days of end of the quarter per the DB Quality Assurance Program (QAP) Guide. The reports were submitted on the following days via ADOREplus:

2023: Q2- July 27, 2023, Q3 - November 30, 2023, and Q4- February 29th, 2024

2024: Q1- April 30, 2024

Department acknowledges and agrees with the findings of the OVF Daily Inspection Reports. The system used by OVF had errors that resulted in missed information on the reports. As a result, OVF has updated the system to remove the printing issue. The reports with only photos of the construction activities were for informational purposes for the inspector and were input into the system erroneously and should have been clearly identified as such. The OVF has been directed by TxDOT to fill all the information on the form and no incomplete forms will be submitted. The Department also is reviewing the reports on weekly basis to ensure they contain the proper information. This is in addition to the weekly coordination meeting between TxDOT, OVI, OVT and IQF. OVF shall communicate with Project Manager and IQF frequently for promptly addressing issues. All parties are housed at the same location so there is daily communication between the teams to ensure any issues are relayed immediately.

Corrective action plan: The steps above will be detailed in an action plan within a revised OVTIP. The revised OVTIP will include updated risk levels for certain inspections. In addition, these updated risk levels will be added to the OVF daily inspection forms. The oversight from the Department on OVF will be increased to ensure all steps are followed. The TxDOT Project team will review the OVF reports weekly. The team is also reviewing and updating the OVTIP to revise the dates for OV Report submission while maintaining the 60 days submission

requirement. The team will continue to discuss the inspections and testing during the weekly joint meeting with OVF, IQF, and TxDOT.

Implementation date: The weekly review of OVI Reports has been implemented on the project since start of 2025. The OVTIP update will be submitted to ALD by April 1st, 2025. Until the revision is approved, Project team will follow the OVTIP.

Responsible Persons: Alternative Project Delivery Supervisor, Fort Worth District

Recommendation 3: The Department should enforce its policies and require the contractor's independent quality control firm to submit daily inspection reports on time with all required information.

Views of responsible officials: The Department acknowledges and agrees with the finding of the SAO Audit. While not shown within the reports, weather conditions are included on the title page of the daily reports.

Corrective action plan: IQF daily reports will be reviewed daily by OVI to ensure timely submission, and any missed reporting will be corrected. Additionally, the deficiencies by IQF have been noted and reflect on the Department's annual contractor evaluation.

Implementation date: March 1st, 2025.

Responsible Persons: Alternative Project Delivery Supervisor, Fort Worth District

MEDIUM

Chapter 2 Widen Freeway I35



The Department made all 25 contract payments from August 2022 to July 2024, totaling \$149,346,794, for the Widen Freeway I35 project in accordance with applicable requirements. In addition, all 21 change orders, which increased the contract amount by \$5,433,685, were properly approved and supported.

Additionally, the Department followed its policies and procedures for all 25 construction materials testing reports tested, and it ensured that commercial laboratories that tested materials were properly accredited. However, the Department’s reporting of daily inspections did not always comply with its policies.

The Department’s processes for reporting daily inspections could be improved.

Daily Work Reports. The Department properly approved all 25 daily work reports tested and included most of the required key information (see text box). However, 19 (76 percent) of the 25 daily work reports were missing required weather and temperature data.

Including weather and temperature information in daily work reports is important because some construction activities can be performed only in certain weather conditions to ensure the safety of the structure.

Daily Work Reports

Daily work reports are the official record of daily activities on a construction project. The reports document all significant occurrences, including work performed, date, hours worked, who performed the work, where the work was performed, and weather conditions.

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

Recommendation

The Department should include all required key information in its daily inspection reports in accordance with its policies.

Management's Response

Recommendation: The Department should include all required key information in its daily inspection reports in accordance with its policies.

Views of responsible officials: TxDOT's Construction Division (CST) agrees that weather and temperature information should be included in all daily work reports.

Corrective action plan: CST will emphasize proper daily work report procedures in future trainings. CST will make this a discussion topic at the next District Directors of Construction quarterly meeting.

TxDOT's Austin District (AUS) daily work reports require weather information per the Construction Contract Administration Manual. Weather is important and TxDOT's policy does not reflect that weather is only one entry per project per day; however, AUS has used the approach to only have one entry per day per project to avoid confusion and conflicting information from different entries.

AUS decided to only have one person handle weather, so it is consistent and not conflicted by others. AUS has submitted a request to CST to consider changes to the manual. CST has agreed to discuss this topic at the next Director of Construction meeting. This meeting would create an open conversation with all 25 directors statewide. This discussion could lead to a change in the manual. AUS Director of Construction will also notify all inspection staff via email of the requirement stated in the current manual.

Implementation date: June 30, 2025, based on discussions at the quarterly meetings.

Responsible Persons: Director of Construction, Austin District



Appendix 1

Objective, Scope, and Methodology

Objective

The objective of this audit was to determine whether the Department of Transportation (Department) has processes and related controls to ensure that bridge projects are administered in accordance with applicable requirements, including state contracting laws.

Scope

The scope of this audit includes the Department's oversight activities related to selected bridge projects that were in the construction phase as of July 1, 2024. These activities include the Department's inspections of these bridge projects, associated payments and change orders, and logical access and application controls that were a part of the Department's oversight process.

The scope also included a review of significant internal control components related to the Department's oversight of bridge projects.

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



- Serra Tamur, MPAff, CIA, CISA, CFE (Project Manager)
- Evan Cresap, CPA (Assistant Project Manager)
- Victor Isoh, MPA
- Benjamin Nathaniel Keyfitz, CPA, CFE
- Matthew Rodriguez, MPAff
- Josh Tsao, JD
- Link Wilson, CFE
- Robert G. Kiker, CFE, CGAP (Quality Control Reviewer)
- Jeannette Quiñonez Garcia, CPA (Audit Manager)

Methodology

We conducted this performance audit from April 2024 through January 2025 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. In addition, during the audit, matters not required to be reported in accordance with *Government Auditing Standards* were communicated to Department management for consideration.

Addressing the Audit Objective

During the audit, we performed the following:

- Interviewed Department staff to gain an understanding of the Department’s oversight process for its construction projects that include bridges.
- Identified the relevant criteria:
 - Texas Transportation Code, Chapters 201 and 223.
 - Texas Administrative Code, Title 43, Part 1, Chapter 9, Subchapter B.
 - Department policies, procedures, manuals, and guidelines.
 - Department’s contract with South-Point Constructors for the Southeast Connector project.
- Analyzed the Department’s data for active design-build and design-bid-build projects with bridges as of July 1, 2024, to select one project from each type for testing. The contract amounts for those two projects totaled \$2.6 billion out of \$37.9 billion (for 799 projects). These contracts were selected based on dollar amount and, for the Widen Freeway I35 project, type of oversight.
- Performed tests on the following documentation:
 - For both the Southeast Connector and Widen Freeway I35 projects:

- All contract payments, to determine whether they were supported, appropriately approved, and accurately paid.
- All change orders approved as of June 30, 2024, to determine whether they were supported, appropriately approved, and included required key information.
- For the Southeast Connector project only:
 - The Owner Verification, Testing, and Inspection Plan, to determine whether it was approved timely.
 - All four quarterly owner verification materials testing reports issued by June 30, 2024, to determine whether they included required key information, complied with the required testing frequency based on category of material, were appropriately approved, and were submitted timely.
 - A sample of the contractor's independent quality firm's (IQF) daily inspection reports, to determine whether they included required key information, were appropriately approved, and were submitted timely. (See Figure 4 on the next page for more details.)
 - A sample of the Department's owner verification firm's (OVF) daily inspection reports, to determine whether they included required key information, complied with the required inspection and testing guidelines, were appropriately approved, and were submitted timely. (See Figure 4 on the next page for more details.)
 - A sample of non-conformance reports, to verify that they included all required key information, were issued within the required timelines, were appropriately approved, and were included on the related payment request. (See Figure 4 on the next page for more details.)
- For the Widen Freeway I35 project only:
 - All five commercial laboratory accreditations, to verify that all labs were properly accredited when they performed materials tests.

- The required authorization forms filed by both construction engineering inspection firms used on the project, to determine whether the firms filed the forms before working on the project.
- Both failed materials test reports, to determine whether they included required key information and were appropriately approved.
- A sample of materials testing reports for passing tests, to determine whether they included required key information, complied with the required testing frequency based on type of material, were appropriately approved, and were submitted timely. (See Figure 5 on the next page for more details.)
- A sample of daily work reports, to determine whether they included required key information and were appropriately approved. (See Figure 5 on the next page for more details.)

Figure 4

Samples Selected for Southeast Connector Project Testing

Description	Population	Sample Size	Sampling Methodology	Representative Determination
IQF Daily Inspection Reports	9,332	25 ^a	Nonstatistical Random	Representative ^b
OVF Daily Inspection Reports	1,346	35	Nonstatistical Random	Not representative ^c
Non-conformance Reports	170	17	Nonstatistical Random	Representative ^b

^a Auditors selected 25 inspector and date combinations for testing. Several of the inspector and date combinations included more than one daily inspection report. As a result, a total of 37 daily inspection reports were tested, as reported in Chapter 1.

^b A non-statistical random sample is representative of the population. This sample design was chosen so the sample could be evaluated in the context of the population. It would be appropriate to project those test results to the population, but the accuracy of the projection cannot be measured.

^c This sample was selected from two different populations due to the Department changing systems during audit scope. Auditors selected 10 of 69 from the first system and 25 of 1,277 from the second system for a total of 35 of 1,346. This sampling design was chosen to ensure a cross section of daily inspection reports from both populations. While these samples were randomly selected, the sample sizes were not proportional. Therefore, they are not representative of the populations, and results cannot be projected to those populations.

Figure 5

Samples Selected for Widen Freeway I35 Project Testing

Description	Population	Sample Size	Sampling Methodology	Representative Determination
Daily Work Reports	1,063	25	Nonstatistical Random	Not representative ^a
Materials Testing Reports (Passing Tests)	3,790	25	Nonstatistical Random	Representative ^b

^a This sample includes daily work reports that were authorized for payment, grouped by inspector and by date. In any given day, the number of reports completed by an inspector might differ. This sampling design was chosen to ensure a cross section of daily work reports authorized for payment, based on inspector and date. Therefore, it is not representative of the population and results cannot be projected to the population.

^b A non-statistical random sample is representative of the population. This sample design was chosen so the sample could be evaluated in the context of the population. It would be appropriate to project those test results to the population, but the accuracy of the projection cannot be measured.

Data Reliability and Completeness

Auditors determined that the following data sets obtained from *ADOREplus* and Site Manager were sufficiently reliable for purposes of this audit. For each data set, auditors (1) observed data extracts, (2) verified queries or report parameters used to extract that data, as applicable, and (3) analyzed the population.

- Data sets pertaining to all construction projects with bridges recorded in *ADOREplus* and Site Manager.
- Data sets pertaining to the Southeast Connector project from *ADOREplus*, which included populations of contract payments, change orders, owner verification materials testing, IQF daily inspection reports, OVF daily inspection reports, non-conformance reports, and list of users with access to the selected bridge project data.
- Data sets pertaining to the Widen Freeway I35 project from Site Manager, which included populations of contract payments, change orders, daily work reports, passing materials testing reports, failed materials testing reports, and list of users with access to the selected bridge project data.

Report Ratings

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.



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The Honorable Robert Nichols, Member, Texas Senate

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Mr. Marc Williams, Executive Director



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