Audit Team
Carl Halvorson, CIA, Audit Manager
June Samadi, MPH, Lead Auditor
Shannon Scheich, MPA, Senior Auditor
Zachary McKenzie, CPA, CIA, Senior Auditor

Audit Management
Timothy M. O’Brien, CPA, Auditor
Valerie Walling, CPA, Deputy Auditor
Dawn Wiseman, CRMA, Audit Director
Sonia Montano, CGAP, CRMA, Senior Audit Manager

Audit Committee
Timothy M. O’Brien, CPA, Chairman
Jack Blumenthal, Vice Chairman
Frank Rowe
Leslie Mitchell
Florine Nath
Charles Scheibe
Ed Scholz

You can obtain copies of this report by contacting us:

Office of the Auditor
201 West Colfax Avenue, #705
Denver, CO 80202
(720) 913-5000

Or download and view an electronic copy by visiting our website at:

Cover photo courtesy of Denver International Airport.
AUDITOR’S LETTER

August 3, 2023

In keeping with generally accepted government auditing standards and Auditor’s Office policy, as authorized by city ordinance, we have a responsibility to monitor and follow up on audit recommendations to ensure city agencies address audit findings through appropriate corrective action and to aid us in planning future audits.

After following up on the “Peña Boulevard Improvements Construction Contract” audit report issued in May 2022, we determined the Airport Infrastructure Management Division fully implemented eight of the recommendations it agreed to, partially implemented two, and did not implement one recommendation.

During the original audit, we found Denver International Airport’s Infrastructure Management Division needed better oversight of its contract changes, invoice approvals, and subcontract management for the Peña Boulevard Improvements to ensure compliance with city and contract requirements.

Based on our follow-up work, we determined the airport did not fully address all the risks associated with our initial findings. Consequently, we may revisit these risk areas in future audits to ensure the city takes appropriate corrective action.

We did not update the status of the two recommendations the Airport Infrastructure Management Division disagreed with in the original report. While we presume it took no action toward implementing Recommendation 1.5, we did obtain and review a copy of the Contract Administration Guide as noted in the division’s response and our addendum for Recommendation 1.7 from the original report. We found steps were added to the guide that address our recommendation. We include these recommendations in this report as a reference.

We appreciate the leaders and team members in Denver International Airport’s Infrastructure Management Division who shared their time and knowledge with us throughout the audit and the follow-up process. Please contact me at 720-913-5000 with any questions.

Denver Auditor’s Office

Timothy M. O’Brien, CPA
Auditor
Denver International Airport needed better oversight of the Peña Boulevard improvements construction project to ensure the best value for the city.

- The contractor, Interstate Highway Construction, did not meet its deadlines for submitting invoices and contract-change proposals. Meanwhile, the airport did not meet its review deadlines and did not formalize deadlines to finalize contract changes and to review the contractor’s requests for information.
- The airport did not correctly document and track issues regarding the contractor’s performance, and it did not accurately track the project budget.
- The airport did not ensure all invoices supported the amount it paid.
- The airport did not comply with requirements to approve subcontractors, and it did not ensure the contractor paid all of its subcontractors the correct amount they were owed.
- The airport lacked a process to choose the best delivery method for construction projects.

**WHY THIS MATTERS**

Without strong project oversight, the airport may not ensure it receives all work in compliance with its contract, and the airport risks overpaying for construction projects and failing to meet project deadlines.
Aug. 3, 2023

Action Since Audit Report
Peña Boulevard Improvements Construction

13 recommendations proposed in May 2022

The Airport Infrastructure Management Division fully implemented eight recommendations made in the original audit report and partially implemented two others.

The division has established a formal monetary penalty mechanism for contractors that fail to meet required submission deadlines, which better ensures timely submission and review of invoices and reduces the risk of the airport overpaying for work that may not have been completed. A workflow in Unifier was created to issue noncompliance reports to contractors, which better ensures documentation and tracking of a contractor’s noncompliance with contract requirements. The division also developed and implemented a guide for selecting a project delivery method using a risk-based approach that is both performed and documented. This reduces the risk to the city of selecting an inappropriate project delivery method that could lead to increased project costs and delays.

**REMAINING RISKS**

The recommendation the airport did not fully implement — together with the two recommendations it disagreed with at the time of the original audit — present several lingering risks. Among them:

- The airport has not formally established review times and deadlines for contract changes. This means any work completed by a contractor before the change orders are finalized may not end up in the final, amended contract and may unnecessarily extend a project’s schedule.

- Without formal coordination with the Division of Small Business Opportunity, project management and contractors may not comply with the subcontractor payment requirements and provide all information needed to monitor participation goals for women and minority-owned construction businesses.

- By not adding a project contingency tracker to Unifier, the airport cannot ensure the amounts paid from the contingency fund are complete and accurate. Inaccurate information could lead to future project overruns if the airport incorrectly approves adjustments to the project that exceed the budget.
**FINDING 1 | Denver International Airport needs better oversight of the Peña Boulevard improvements construction project to ensure the best value for the city**

---

**FULLY IMPLEMENTED**

<table>
<thead>
<tr>
<th>Recommendation 1.1</th>
<th>ESTABLISH MONETARY PENALTIES FOR LATE SUBMISSIONS – The Airport Infrastructure Management Division should establish a formal mechanism to impose monetary penalties on contractors that fail to meet required submission deadlines.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGENCY ACTION</strong></td>
<td><strong>Agency's original target date for completion: Aug. 17, 2022</strong></td>
</tr>
<tr>
<td></td>
<td>The Airport Infrastructure Management Division established a formal monetary penalty mechanism for contractors that fail to meet required submission deadlines. The division created a matrix to measure a contractor’s performance using performance metrics such as contract deliverables, updated project schedules, project and performance reports, and change orders related to the project contract.</td>
</tr>
<tr>
<td></td>
<td>Approved in November 2022, the monetary penalty mechanism requires a contractor’s performance to be measured against performance metrics on a monthly basis when the contractor submits an invoice and request for payment.</td>
</tr>
<tr>
<td></td>
<td>As of April 2023, division staff said there has not been a need to use the monetary penalty mechanism yet.</td>
</tr>
<tr>
<td></td>
<td>Based on this, we consider this recommendation fully implemented.</td>
</tr>
</tbody>
</table>

| Recommendation 1.4 | DESIGN WORKFLOW TO TRACK NONCOMPLIANT WORK – The Airport Infrastructure Management Division should design and implement a workflow in Unifier dedicated to tracking and documenting all required documents to monitor the noncompliance reports it issues to contractors. |
AGENCY ACTION

Agency’s original target date for completion: Dec. 14, 2022

The Airport Infrastructure Management Division designed and implemented a workflow in Unifier to submit and review “non-conforming work” reports issued to contractors when they fail to complete work in compliance with contract requirements. The division provided a Unifier user guide that outlined how staff should create a noncompliance report, which details to include in the report, and how managers should review the report for approval in Unifier. The user guide also included a workflow graphic and screenshots to show the overall noncompliance report process in the system. Project managers can send noncompliance reports directly to contractors in Unifier.

Additionally, we obtained and reviewed a noncompliance report and the associated record information from Unifier. The report contained relevant details on the non-conforming work as well as proposed actions and timelines for correcting non-conforming items. The record information from Unifier also showed the dates and times that the noncompliance report progressed through the system.

During the original audit, airport staff documented issues in paper files and communicated them using Unifier’s email function. This process did not ensure consistent documentation of the division’s inspections and final dispositions.

Because of this change, we consider this recommendation fully implemented.

Recommendation 1.6

DEVELOP POLICIES AND PROCEDURES FOR COST ESTIMATE SERVICES – The Airport Infrastructure Management Division should develop policies and procedures for providing cost estimate services in design-build contracts to ensure:

- A contractor’s labor and equipment estimates are reasonable before the airport approves a contract change.
- “Not-to-exceed” amounts are supported by documentation.

AGENCY ACTION

Agency’s original target date for completion: Aug. 17, 2022

The Airport Infrastructure Management Division developed and implemented new policies and procedures to ensure contractor estimates are reasonable and “not-to-exceed” amounts are supported by documentation. All projects are required to use the standard defined in the policy when assessing whether an estimate is required on project changes.

These procedures formalize and define when estimates are required, the
type and level of estimation needed and any documentation required to complete the estimate. In addition, the policy defines a standardized approach and template that is used when completing estimates for the division’s projects. Defined thresholds assist estimators in assessing whether an estimate is required and incorporates factors such as cost, change value amount, and risk. The division provided an example of a change order estimate and relevant supporting documentation, and we found that the estimate was validated according to the new policy.

Because of these changes, we consider this recommendation fully implemented.

Recommendation 1.8  

UPDATE POLICIES AND PROCEDURES FOR INVOICE REVIEW – The Airport Infrastructure Management Division should update its policies and procedures for lump-sum invoices to ensure they are complete and accurate before the airport approves them. At a minimum, the policies and procedures should include:

• Steps to ensure issues with the percentage of work completed are fully resolved and documented.
• A checklist to ensure all required documents are included such as all backup support for bond payments and project schedules.
• Steps to ensure all checks performed by staff on the percentage of work completed are formalized in the procedures.
• Steps to ensure the progress payment totals on the schedule of values match both the information recorded in Unifier and the information included on a contractor’s invoice and certification of payment.
• Steps to ensure compliance with the city’s policy for general contract conditions to receive an updated schedule of values prior to each invoice submission.

AGENCY ACTION  

Agency’s original target date for completion: Dec. 14, 2022

The Airport Infrastructure Management Division has updated its invoicing process and corresponding policies and procedures to ensure invoices follow a standardized review process and are complete and accurate prior to approval. The division has also conducted training on new invoicing processes with appropriate staff.

The updated policies and procedures address the recommendations as follows:
• Invoice review processes require contract administrators to meet with the contractor to agree on the percentage of work completed when draft invoices are submitted. A standardized agenda template is used to guide these discussions and to ensure consistency.

• A checklist has been created to document step-by-step verification of each approver on an invoice and includes specific procedures and supporting documentation required to be reviewed during the process. This checklist includes ensuring all backup documentation is up to date and is included with the invoice as well as steps to ensure the progress payment totals on the schedule of values match both the information recorded in Unifier and the information included on a contractor’s invoice and certification of payment.

Because the division has implemented all parts of this recommendation, we consider this recommendation fully implemented.

**Recommendation 1.9**

**DEVELOP A PROCESS TO MONITOR SUBCONTRACTOR SELECTION** – The Airport Infrastructure Management Division should develop and implement a process to ensure compliance on design-build contracts with the following requirements in the city’s policy for general contract conditions:

• Documentation of written acceptance for all subcontractors used on the project.

• Documentation from the contractor certifying subcontractor qualifications.

**AGENCY ACTION**

*Agency’s original target date for completion: Aug. 17, 2022*

The Airport Infrastructure Management Division developed and implemented a form to ensure compliance on design-build contracts with the city’s policy for general contract conditions requirements. This form is used to document the written acceptance of all subcontractors used on a project and the contractor’s certification of subcontractor qualifications.

We reviewed the division’s subcontractor acceptance certification form created in January 2023 and found it aligned with the general contract condition requirements. The form included a section to list:

• Accepted subcontractors used on a project.

• Rejected subcontractors and check boxes corresponding to applicable reasons outlined in the general conditions.

• Certification of subcontractor qualifications for the last five years.

The form is reviewed and approved by the Project Manager, Supervisor, and Director of the Airport Infrastructure Management Division.
We requested an example of a completed form, however, as of July 2023, division staff said they have not issued a Design-Bid contract recently. Therefore, we consider this recommendation fully implemented.

Recommendation 1.11

**CONDUCT TRAININGS** – The Airport Infrastructure Management Division should develop and conduct training with project management staff on the applicable subcontractor payment requirements prior to the start of each project to ensure the contractor follows subcontractor payment requirements.

**AGENCY ACTION**

*Agency's original target date for completion: Aug. 17, 2022*

The Airport Infrastructure Management Division developed a PowerPoint presentation and conducted training to communicate updates made to applicable subcontractor payment requirement processes in November 2022. This training was presented to the division and is now part of the onboarding process for project management staff.

We reviewed the training presentation, which describes the revisions made to each applicable subcontractor payment process. These updates included:

- Establishing monetary penalties for late submissions.
- Response times for received information requests for project management review.
- Change management procedures and when to use them.
- Describing the subcontractor payment verification process.
- Project management review process for final payment to subcontractors.

The training also explained how each revised procedure should be used on projects using real world examples. The presentation had links to access each revised procedure from the airport's SharePoint site and included a question and answer section.

Because of these changes, we consider this recommendation fully implemented.

Recommendation 1.12

**EVALUATE NEED FOR WAIVERS** – The Airport Infrastructure Management Division should work with the City Attorney’s Office airport legal services section to evaluate and document whether partial liens should be required, and if the costs outweigh the benefits, the airport should waive this specific requirement for its projects.
<table>
<thead>
<tr>
<th>AGENCY ACTION</th>
<th>Agency's original target date for completion: Aug. 17, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In March 2023, the Airport Infrastructure Management Division developed and implemented a waiver to eliminate the requirement that subcontractors and suppliers must submit partial claim releases to receive payment. This waiver applies to all projects subject to the general contract condition.</td>
</tr>
<tr>
<td></td>
<td>Airport management and its legal services division met in July 2022 to discuss and draft the claims release memorandum. The airport said they followed the same process and template as the Department of Transportation &amp; Infrastructure, which had already eliminated the requirement, to ensure consistency across both agencies.</td>
</tr>
<tr>
<td></td>
<td>Airport staff said they waived this requirement because the process was an “administrative burden for both the contractor and project team that did little to protect the airport’s liability.” Furthermore, since the Department of Transportation &amp; Infrastructure has already worked with the City Attorney’s Office and were granted approval to eliminate the process in August 2020, the airport wanted to be in alignment with its partnering agency.</td>
</tr>
<tr>
<td></td>
<td>Based on this, we consider this recommendation fully implemented.</td>
</tr>
</tbody>
</table>

| Recommendation 1.13 | DEVELOP AND IMPLEMENT A DELIVERY METHOD SELECTION PROCESS – The Airport Infrastructure Management Division should develop and implement policies and procedures that document the decision-making process for selecting a project’s delivery method in alignment with leading practices, such as the Colorado Department of Transportation’s design-build manual. |

<table>
<thead>
<tr>
<th>AGENCY ACTION</th>
<th>Agency's original target date for completion: Dec. 14, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Airport Infrastructure Management Division developed and implemented a procedure guide for how to document the decision-making process for selecting a project’s delivery method.</td>
</tr>
<tr>
<td></td>
<td>We compared the airport’s project delivery method guide with leading practices from the Airport Cooperative Research Program related to selecting airport capital project delivery methods and the Colorado Department of Transportation related to project delivery selection matrix. We found the airport’s project delivery method guide aligned with these leading practices. The guide provides a step-by-step formal process to ensure a risk-based approach is both performed and documented, which reduces the risk to the city in selecting an inappropriate project delivery method that could lead to increased project costs and delays.</td>
</tr>
<tr>
<td></td>
<td>The airport published this guide in December 2022 and has already used it</td>
</tr>
</tbody>
</table>
to determine the appropriate project delivery method for the next phase of the Peña Boulevard program. We reviewed a copy of this analysis and found the decision-making process was thoroughly documented and aligned with the procedures outlined in the project delivery method guide.

The division is developing a plan to fully train all its staff, leadership, and project management teams to ensure the procedure outlined in the guide is used in a consistent and effective manner. However, they have not communicated a specific date for this training.

Because of this change, we consider this recommendation fully implemented.

PARTIALLY IMPLEMENTED

Recommendation 1.3

UPDATE PROCEDURES FOR PROJECT MANAGEMENT REVIEW – The Airport Infrastructure Management Division should update its policies and procedures to formally establish review times and deadlines for contract changes and contractor requests for information.

AGENCY ACTION

Agency’s original target date for completion: Aug. 17, 2022

The Airport Infrastructure Management Division updated its policies and procedures to include established review times and deadlines for contractor requests for information, but not for contract change orders.

The procedures require the airport project manager to facilitate a response to the contractor within 14 calendar days of receipt of a request for information. This deadline is a requirement for original requests for information, re-submissions, and any reviews of requests for information from a third party.

During a follow-up discussion with airport leadership in July 2023, the airport provided additional procedures that describe review timeframes related to contract changes. However, the procedures do not clearly indicate that those review time frames apply to change orders.

During the original audit, we found project staff followed a 10-day standard to finalize all contract changes, but neither the contract nor any procedures documented this standard review time. Any requested changes to a contract are not binding until the airport finalizes them through a change order.

Because the airport has not formally established review times and deadlines for contract changes, the risk remains that any work completed
by a contractor before the change orders are finalized may not end up in the final, amended contract and may unnecessarily extend a project’s schedule.

Based on this, we consider this recommendation partially implemented.

**Recommendation 1.10**

**DEVELOP PROCEDURES FOR SUBCONTRACTOR PAYMENTS** – The Airport Infrastructure Management Division should develop and implement procedures to ensure subcontractors’ payment information is recorded in the contractor’s payment applications at the time of each invoice period. These procedures should also include steps to coordinate with the Division of Small Business Opportunity at the beginning of the project to ensure all information required to track compliance with city rules for subcontractor payments will be included on each payment application.

**AGENCY ACTION**

*Agency’s original target date for completion: Aug. 17, 2022*

The Airport Infrastructure Management Division developed and implemented procedures during the fourth quarter of 2022 to ensure subcontractors’ payment information is recorded in the contractor’s payment applications at the time of each invoice period.

These new procedures were added to the airport’s progress payment procedures saying the contractor shall “report all work performed by the subcontracted parties and current payment status.” The report shall include the following information for each subcontractor:

- Total value of work performed.
- Total amount paid to date and last payment date.
- Current balance due and remaining balance to be paid.
- Payment terms.
- Planned payment dates.

While the updated procedures meet the requirements to develop and implement procedures to ensure subcontractor payment information is recorded in the contractors’ payment application, the procedures did not include steps to coordinate with the Division of Small Business Opportunity as outlined in the recommendation. This step would ensure all information required to track compliance with city rules for subcontractor payments would be included on each payment application.

Airport leaders provided additional information from a construction agreement to show the contractor is responsible for submitting a utilization plan to the Division of Small Business Opportunity. But this information details compliance requirements for participation goals and does not include the steps for the initial coordination with the division that should
occur at the beginning of a project.

Without formal coordination with the Division of Small Business Opportunity, the risk remains that project management and contractors may not comply with the subcontractor payment requirements and provide all information needed to monitor participation goals for women and minority-owned construction businesses.

Because of this, we consider this recommendation partially implemented.

---

**NOT IMPLEMENTED**

**Recommendation 1.2**

**REVIEW POLICIES AND PROCEDURES** – The Airport Infrastructure Management Division should formally review project management plans and other procedures during its post-project lessons learned meetings to ensure the plans include procedures that reflect actual practice.

**AGENCY ACTION**

*Agency’s original target date for completion: July 18, 2022*

The Airport Infrastructure Management Division provided a lessons learned meeting log from April 2022 that said the “project management plan should be reviewed and updated regularly throughout the project life cycle to include procedures that reflect actual practice.”

We requested additional lessons learned meeting logs to show project management plans and other procedures were being reviewed. The division provided various construction project meeting minutes that included a lessons learned section, but there was no mention of review activities being conducted for the project management plans.

During the original audit, we noted airport procedures said staff should update procedures throughout a project as new information becomes available. Staff said they could review procedures as part of the lessons learned meetings conducted after each project to ensure all necessary updates are made. However, the division did not provide supporting documentation to show this process was being implemented during lesson learned meetings.

Based on this, we consider this recommendation not implemented.
### DISAGREED

**Recommendation 1.5**  
**DESIGN WORKFLOW FOR BUDGET TRAINING** – The Airport Infrastructure Management Division should design and implement a workflow in Unifier dedicated to tracking contract-change approvals that affect a project’s contingency fund.

**AGENCY ACTION**  
The Airport Infrastructure Management Division took no action to implement this recommendation because they disagreed with it in our original report.

This was the airport’s response to the recommendation when the original report was issued in May 2022:

> DEN currently utilizes the cost sheet in Unifier which contains the contingency and a process to track contingency draw down. The Cost Management PM Guide was published in September 2021, and it defines the workflow and outlines how contingency is monitored throughout the project life cycle. The Peña Boulevard Project was set up in Unifier in 2017 when this functionality was not available to the Program Management Team (PMT), and they needed to implement an interim solution. Projects that are active after January 1, 2022, must use the contingency tracking functionality in Unifier in accordance with the Cost Management PM Guide.

For the original report, we wrote the following addendum rebutting the airport’s response:

> The airport’s response notes projects active after Jan. 1, 2022, must use the contingency tracking functionality in Unifier in accordance with the Cost Management PM Guide. The Peña Boulevard Improvements construction contract started in 2019, so this process was not followed, and the contingency tracking was conducted outside of Unifier. As we describe on pages 17-18 of the report, we were informed by staff that the tracker is updated manually because Unifier lacks a workflow to track costs within the system. We were not informed during the audit that the tracking functionality in Unifier was available and used for projects as of Jan. 1, 2022, and therefore were unable to verify the workflow in Unifier or the process. We identified inaccuracies in the manual updates to the contingency tracker. If tracking continues outside Unifier for the remaining phases of the Peña Boulevard Improvements construction contract, the airport should consider developing other controls to ensure...
Recommendation 1.7

UPDATE POLICIES AND PROCEDURES FOR CONTRACT CHANGES – The Airport Infrastructure Management Division should update its policies and procedures related to reviewing and approving contract changes to ensure all changes are fully supported by documentation before the airport makes payments toward the change. The updated procedures should, at a minimum, include steps to ensure all related information — such as email review notes or verbal discussions — are documented and included in the contract-change workflow in Unifier as well as steps to ensure all invoices are provided and reviewed before the airport makes payments toward those changes.

AGENCY ACTION

As noted in its response, the Airport Infrastructure Management Division published a Contract Administration Guide, which we obtained and reviewed as part of this follow-up review. We found the division has taken steps to implement this recommendation. Specifically, the guide includes a process to ensure information related to contract changes, such as verbal agreements, are included in Unifier and that invoices are obtained and reviewed prior to making payments for changes.

This was the airport’s response to the recommendation when the original report was issued in May 2022:

AIM Development published a new Contract Administration Guide in Feb 2022. Based on those processes and procedures, going forward the CAs will collate a record of negotiations for each Change Order which will be attached in Unifier as back-up documentation. This includes meeting minutes, emails, forms, letters, and other appropriate documentation. Verbal agreements will need to be documented in writing.

For the original report, we wrote the following addendum rebutting the airport’s response:

The airport’s response notes a new Contract Administration Guide was published in February 2022 that outlines appropriate support documentation for invoices would be included in Unifier. Although during the audit we discussed our concerns that all support documentation for the invoice amounts paid to Interstate Highway Construction were not included in Unifer, we were not informed that a new guide was in the process of being developed or implemented. In addition, the response does not specifically include reference to a review process taking place prior
to the approval of invoices, which is emphasized in our recommendation. We are pleased that the airport has taken action to address this concern, but since we were unable to verify this information, we will review the guide and new process during our follow-up activities.
Office of the Auditor

The Auditor of the City and County of Denver is independently elected by the residents of Denver. He is responsible for examining and evaluating the operations of city agencies and contractors for the purpose of ensuring the proper and efficient use of city resources. He also provides other audit services and information to City Council, the mayor, and the public to improve all aspects of Denver’s government.

The Audit Committee is chaired by the Auditor and consists of seven members. The Audit Committee assists the Auditor in his oversight responsibilities regarding the integrity of the city's finances and operations, including the reliability of the city’s financial statements. The Audit Committee is structured in a manner that ensures the independent oversight of city operations, thereby enhancing residents' confidence and avoiding any appearance of a conflict of interest.

201 West Colfax Avenue, #705
Denver, CO 80202
(720) 913-5000
www.DenverAuditor.org

Our Mission
We deliver independent, transparent, and professional oversight in order to safeguard and improve the public's investment in the City and County of Denver. Our work is performed on behalf of everyone who cares about the city, including its residents, workers, and decision-makers.