FOLLOW-UP REPORT
Denver International Airport
Hotel and Transit Center Audit
August 2017
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Audit report year: 2014
August 3, 2017

Kim Day, Chief Executive Officer
Department of Aviation
City and County of Denver

Re: Audit Follow-Up Report

Dear Ms. Day:

In keeping with generally accepted government auditing standards and the Audit Services Division’s policy, as authorized by D.R.M.C. § 20-276, our Division has a responsibility to monitor and follow-up on audit recommendations to ensure that audit findings are being addressed through appropriate corrective action and to aid us in planning future audits.

This report is to inform you that we have completed our follow-up effort for the Denver International Airport (DIA) Hotel and Transit Center performance audit issued November 20, 2014. Our review determined that DIA personnel adequately implemented 8 of the 11 recommendations made in the audit report. Despite these efforts, auditors determined that the risk associated with the audit team’s initial findings has not been fully mitigated. As a result, the Division may revisit these risk areas in future audits to ensure that appropriate corrective action is taken.

For your reference, this report includes a highlights page that provides background and summary information on the original audit and the completed follow-up effort. Following the highlights page is a detailed implementation status update for each recommendation.

This concludes audit follow-up work related to this audit. I would like to express our sincere appreciation to you and to DIA personnel who assisted us throughout the audit and follow-up process. If you have any questions, please feel free to contact me at 720-913-5000 or Sonia Montano, Internal Audit Supervisor, at 720-913-5157.

Denver Auditor’s Office

Timothy M. O’Brien, CPA
Auditor
Denver International Airport
Hotel and Transit Center
August 2017

Status
Denver International Airport has implemented 8 of the 11 recommendations made in the November 2014 audit report.

Background
In 2011, Denver International Airport (DIA) leadership set the budget for the Hotel and Transit Center (HTC) at $500 million. By 2013, DIA leadership increased the budget to $544 million to more accurately reflect the probable cost to complete HTC. Currently, HTC Program Managers estimate that it will cost as much as $599 million to complete HTC. In addition to the cost of completing the project, DIA leadership estimates that it will cost as much as $138 million to complete other capital projects that are being constructed by HTC contractors.

Purpose
The objective of the audit was to determine whether DIA has an adequate project management structure in place to:
- Identify and mitigate the risks that may impact the project’s budget
- Ensure that costs related to HTC are properly accounted for
- Ensure that DIA is strategically prepared for future capital planning and maintenance

Highlights from Original Audit
Our review of the HTC project yielded the following findings:

- The HTC budget had increased and will increase again.
  - In 2011, the budget was set at $500 million, increased in 2013 to $544 million, and may increase up to $599 million or more.
  - The process DIA put in place to control cost-inducing project changes was not sufficient to keep costs from rising.
  - Budget increases may have resulted from:
    - DIA not having an independent construction consultant on staff; and
    - Costly contract terms that were negotiated to incentivize on-time project completion.
- We could not provide assurance that the budget would not exceed $599 million.
  - This was due in part to lack of documentation.
  - Further, the HTC invoice review process was insufficient to assess whether all project costs had been reasonable and in compliance with contract terms.
- Additional costs will add $130 million to the overall cost of the redevelopment program, including:
  - $75 million for other related capital projects;
  - $53 million for RTD infrastructure; and
  - $2 million that had not been captured by any established budget.
- DIA leadership’s focus on HTC may have reduced focus on the funding of non-HTC-related projects and maintenance of the existing facility.
  - Capital investments in the airfield had fluctuated and budget reductions made to specific projects raise some concerns.
  - Capital investments in the terminal complex had decreased.
  - DIA did not have operations maintenance plans in place, despite the fact that DIA is an aging facility.

Findings at Follow-up
Of the 11 recommendations made, 8 have been fully implemented. The Airport Infrastructure Management Division implemented all three of their recommendations by implementing industry leading project control methods regarding estimating, scheduling, change order management, risk management, budget, and resources. Further, DIA has retained a third-party to assist with unique and complex projects. The two recommendations related to the change order approval process and conducting interim construction audits on the HTC project were not implemented.

For a copy of this report, visit www.denvergov.org/auditor or contact the Auditor’s Office at 720-913-5000.
# Recommendations: Status of Implementation

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<td><strong>FINDING:</strong> DIA Leadership Has Taken Action to Improve Project Management of the Hotel and Transit Center but These Efforts Have Not Been Fully Effective in Mitigating Risks</td>
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<td>1.1 Change Management Committee – The Change Management Committee should develop a process by which change orders can be approved timely to ensure that all significant contractors’ changes are approved by the Change Management Committee prior to work commencing.</td>
<td>All change orders from February through April 2015 were incorporated into the Mortenson, Hunt, Saunders contract amendment and did not require approval by the Change Management Committee. Subsequent change orders were approved by the Committee. However, the change order approval process has not been changed to ensure that approval was obtained prior to work commencing.</td>
<td>Not Implemented</td>
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<td>1.2 Project Management Structure and Timing – DIA Executive Leadership should establish a project management structure that includes change management early in the process of future construction projects in order to meet DIA’s needs and provide the greatest opportunity for budgetary success.</td>
<td>The Airport Infrastructure Management Division (AIM) has established a Project Manager Office (PMO), the responsibilities of which include implementing industry leading project control methods regarding estimating, scheduling, change order management, risk management, budget, and resources. Unifier, a project reporting system, continues to be refined to align with AIM’s processes and procedures and to track and record projects. Project Managers have received some Unifier training sessions in order to standardize the use and updating of the tool. In addition, individual project sites now exist on the DIA intranet (SharePoint) site to enhance project communication.</td>
<td>Implemented</td>
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<td><strong>1.3</strong> Construction Close-Out Review – The DIA Chief Executive Officer should make specific plans to engage a qualified resource to conduct a construction close-out review of the project records maintained by the Hotel and Transit Center Project Management Team, the tri-venture parties, and as may be necessary any applicable subcontractors, to assist DIA in the determination that there have been no material third-party overbillings to the airport. The DIA Chief Executive Officer should ensure that the recommended construction close-out review begin no later than three months before substantial completion of the project and continue until the final change order and invoice is submitted by Mortenson, Hunt, and Saunders.</td>
<td>The external consultant who was retained early in the project to assist in designing a change management process and contain costs to keep within the project budget also provided ongoing oversight of the HTC project, including the closeout phase. However, DIA did not provide auditors with support documentation to verify this process, including a copy of the construction close-out review plan.</td>
<td>Partially Implemented</td>
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<td>1.4 Independent Construction Consultant – The DIA Chief Executive Officer should retain an independent construction consultant to assist DIA leadership and personnel in reviewing and negotiating contract terms on any future unique and large scale construction projects to ensure that DIA and the City obtain fair or favorable contract terms.</td>
<td>AIM retained the services of an independent construction consultant to assist with unique and complex projects. The consultant was utilized on the Fire Station #35 project to provide pre-construction audit services for the general contractor and four major sub-contractors. The consultant made several recommendations to help negotiate the final guaranteed maximum price number and their review of management payroll conditions substantiated several areas where cost savings could be achieved. AIM’s final closeout tollgate meeting on the project highlighted the supportive efforts of the consultant as a positive lessons learned. Inputs throughout the project on process improvements were beneficial and offered additional insight into document capture and the close-out timeline. Subsequent to the project, DIA has hired a Construction On-Call Contractor as part of AIM’s professional services contracts going forward, which will be used for large projects to provide oversight not only on financials, but process adherence and improvement as well.</td>
<td>Implemented</td>
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<td><strong>1.5</strong> Organization of Records – DIA Executive Leadership should take the necessary steps to ensure records related to the Hotel and Transit Center project are properly maintained and organized.</td>
<td>A review of the document management process was conducted by the Project Management Team, which led to a process of monthly reviews and corrections. As part of this review, the records were checked for file integrity, metadata accuracy, transmission recordings, review history and finalization of statuses. DIA will keep the records in accordance to the City’s records retention policies.</td>
<td>Implemented</td>
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<td><strong>1.6</strong> Records Retention – DIA Executive Leadership should ensure the Hotel and Transit Center project records are retained in accordance with the City’s retention schedule.</td>
<td>Similar to the auditee action noted in Recommendation 1.5, a review of the document management process was conducted by the Project Management Team and records will be kept by DIA in accordance to the City’s records retention schedule.</td>
<td>Implemented</td>
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<td><strong>1.7</strong> Interim Construction Audits – The DIA Hotel and Transit Center Project Management Team should conduct periodic interim audits prior to substantial completion to address any potential payment problems that may be better addressed during the project than at the conclusion of the project, which may include statistical sampling.</td>
<td>DIA personnel indicated that quarterly audits were performed on invoices from the various contractors. However, when the audit team requested support documentation to see evidence of these audits, DIA could not provide them. Therefore, auditors were unable to verify that this action was taken. DIA also indicated that the CPA firm BKD conducted audits of the final contracts. However, BKD’s work was solicited by the City’s Auditor, and the work was limited to evaluating DIA’s cost allocation methodology of the HTC Program.</td>
<td>Not Implemented</td>
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Original target date for completion: January 2015
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<td><strong>1.8</strong>  Dashboards – The DIA Hotel and Transit Center Program Managers should include additional elements in the monthly dashboards such as current schedule and estimates of project completion. In addition, to increase the transparency of the project the monthly dashboards should be made public.</td>
<td>The monthly dashboards were revised to include Program Accomplishments and Schedule Milestones, which address the recommendation. Although the dashboards were not made public, information was made available to the public through other methods.</td>
<td>Implemented</td>
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<td><strong>1.9</strong>  Capital Projects Classification – The DIA Chief Executive Officer should ensure that the classification system is used, which will help ensure that the need and cost of capital projects are not misinterpreted or misconstrued by the simultaneous pursuit of other capital projects.</td>
<td>The Guide to the Capital Approval Process has been updated appropriately. The guide was developed to explain the steps in DIA’s Capital Approval Process (CAP), from identification of a new project opportunity through project close-out. It defines the roles and responsibilities of the participants involved in the CAP. The DIA Executive Team reviews the DIA Capital Improvement Plans on at least an annual basis to align project approval decisions with overall DIA strategic plans and to provide direction to future capital allocation priorities.</td>
<td>Implemented</td>
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<td><strong>1.10</strong>  Additional Redevelopment Costs – The DIA Hotel and Transit Center Program Managers should evaluate and include costs associated with the redevelopment program that are not yet captured in the current budgets.</td>
<td>The HTC Project Management Team’s monthly forecast process included a review of all program related costs, and as those costs became actual, they were allocated correctly.</td>
<td>Implemented</td>
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<td>1.11 Enhance Maintenance – The DIA Chief Executive Officer should ensure that the Airport Infrastructure Maintenance Division continues to implement the comprehensive asset management improvement program, which will include operations maintenance plans, to assure that maintenance is appropriate for the airport.</td>
<td>AIM has improved and continues to improve the airport's asset management improvement program; this was verified when conducting our DIA HTC Project Integration audit in 2015. DIA added an Asset Management team, AIM, which has completed a comprehensive plan that includes the following key sections: Asset Management Policy, Asset Management Strategy, and Asset Management Handbook. DIA personnel are also working towards implementing a five-year rolling operations and maintenance plan, utilizing Maximo to its full potential and performing baseline condition assessments for assets. Maximo and BIM will be connected to capture specifications data for all HTC systems and equipment to allow AIM to be more informed on decisions related to repairing or replacing assets. This will also assist AIM's plans to prioritize future assessments with a focus on the primary, critical, and expensive systems first.</td>
<td>Implemented</td>
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Conclusion

While Denver International Airport (DIA) personnel have implemented some recommendations made in the Hotel and Transit Center audit report, others were not acted upon or fully implemented. Despite DIA’s efforts, auditors determined that the risk associated with the audit team’s initial findings has not been fully mitigated. For example, with regard to Recommendation 1.1, we found that work had commenced prior to the approval of change orders and the process was not revised to address this issue. Although the HTC project is complete, the risk of this occurring on other projects is still a possibility. As a result, the Audit Services Division may revisit these risk areas in future audits to ensure that appropriate corrective action is taken.

On behalf of the citizens of the City and County of Denver, we thank staff and leadership from DIA for their cooperation during our follow-up effort and their dedicated public service.