

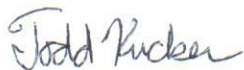
April 13, 2012

VICE CHANCELLOR MILLER

Subject: Final Audit Report No. M12A002
Construction Audit

Attached is the final report for Audit No. M12A002: Construction Audit (Systemwide). It includes action plans that were developed by members of your staff. These action plans will be entered into the TeamCentral Database and monitored until completion. With the issuance of this final report, please destroy any previous draft versions.

I appreciate the assistance provided to me by your staff during the review. If you should have any questions, please feel free to contact me.



Todd Kucker
Internal Audit Director
UC Merced Internal Audit Services

Attachment

cc: SVP Vacca
Chancellor Leland
Vice Chancellor Miller
Associate Vice Chancellor Lollini
Director Murray
Director Knox
Director Hicks

**UNIVERSITY OF CALIFORNIA, MERCED
INTERNAL AUDIT SERVICES**

**Construction Audit (Systemwide)
Report No. M12A002**

April 13, 2012

Work Performed by:
Todd Kucker, Internal Audit Director

Introduction

A construction review was included as part of the annual audit plan for 2011-2012. This was part of a systemwide audit that was performed on all ten UC Campuses and Lawrence Berkeley National Laboratory.

Objectives and Scope

The purpose of this audit was to assess the effectiveness of construction management policies and procedures and internal controls and processes related to the administration of construction activities.

The scope of the audit included the bid and award process, change orders execution, and compliance with funding requirements.

Bid and Award Process

To review the bid process, we reviewed the bids received for the Housing 4 project. We reviewed the bidding procedures included in the UC Facilities Manual and evaluated the advertising for bids process, administration of the bid process, the bid evaluations and bidder selections, and other processes as performed by the project team. The bid process appears well managed.

Change Orders Execution

To review processes related to change orders, we reviewed change orders paid on the Social Sciences and Management Building project. A total of fifteen change orders were reviewed to determine if change orders were submitted in compliance with the vendor contracts. Primary focus was on the project team's review and approval process of change order details. Around \$16,000 of over-billings were identified on the change orders reviewed.

Funding Requirements

To review restrictions and requirements related to funding, we reviewed the most frequently used sources of funding for construction projects during the past three years. We reviewed funding documents and discussed requirements with Capital Planning and Physical Planning, Design, and Construction staff. Primary focus was on how the campus monitors compliance with funding restrictions or requirements. Procedures for identifying and monitoring funding requirements appear sufficient.

Overall Conclusion

A couple issues and areas for improvement with change orders include:

- The project team's review of change order documentation did not always identify billing errors which caused the University to overpay for the work performed.
- When change order costs exceeded \$100,000, documentation was not sufficient to convincingly demonstrate that no advantage would be gained through competitive bidding the work.

Management Corrective Actions

Management has provided Action Plans that address the issues identified in the report and as detailed in the Opportunities for Improvement Section.

Opportunities for Improvement and Action Plans

1. Review of Change Orders

During the testing of change orders, we noted instances where contractors overcharged the University for work completed which were not identified during the project team's review process. The following are examples of what was noted.

- On change orders, contractors are allowed 15% profit over and above their "cost of extra work", which are outlined in the contract. In one instance, the contractor erroneously charged 150% profit rather than 15%. This error resulted in the contractor overcharging the University by \$13,167 for the work on this change order.
- One contractor charged \$50 per day for subsistence, although this sort of fee was not included in the allowable costs of extra work as listed in the contract. After the contractor's profit was added, this daily fee resulted in the contractor overcharging the University by \$1,322.
- An instance was noted where a contractor incorrectly calculated wage costs. Rather than charging a wage rate of \$64.38 per hour, a mathematical error caused the wage rate to be \$147.34 per hour. This error caused the contractor to overcharge the University by \$681.
- In one instance, a contractor incorrectly charged the University sales tax on their costs of renting equipment. The backup documentation did not show that the contractor had been charged sales tax by the rental company. The University was overcharged by \$840.

On the multiple prime contractor project reviewed, a contractor has the role of construction manager over the project. One of the responsibilities of this contractor is to review and approve the backup documentation for change orders received from the various contractors on the project. The issues noted above were not identified during the contractor's review of the backup documentation.

During early 2011, Physical Planning, Design, and Construction staff noted that the construction manager was not adequately identifying errors during their review of documentation. As a result, they put together a change order review checklist that outlined the many details which the construction manager was to review. Upon completion of the checklist, the construction manager had to certify on the checklist that the documentation was properly reviewed. The majority of the errors noted were from before this checklist was implemented.

Management Action Plan:

We are in the process of hiring an additional administrative analyst for Physical Planning, Design, and Construction. One of the responsibilities of this new employee will be to review change order documentation to verify that the University is only paying for allowable costs. We will continue to have construction managers on projects complete the change order review checklist. For the billing errors noted during the audit, we will request repayment from the contractors. This action will be completed by July 31, 2012.

2. Documenting reasons for not utilizing competitive bidding

During the testing of change orders, we noted work totaling \$276,956 paid to a contractor on a change order where the reasons for not competitive bidding the portion of the project were not adequately documented.

The UC Facilities Manual has the following requirement when a change order is over \$100,000:

"If the cost of a change in the scope of work to be accomplished by a change order or series of change orders exceeds \$100,000 (the dollar value for formal competitive bidding), or if the proposed changes in design are not incidental to the scope of the work as bid, the work may not be performed by change order unless it can be convincingly demonstrated that no advantage would be gained by conducting an advertised bid for the work. Among the factors considered in determining whether such a change order is permissible are the following:

1. Will the new work cost more or less if competitively bid?
2. Will significant portions of the work performed under the existing contract have to be reworked to coordinate with the new work?
3. To what extent will project completion and ability to occupy the facility be affected by competitively bidding the new work versus proceeding by change order?
4. Will there be an adverse impact on the use of completed space if the new work is competitively bid either during the performance of the existing contract or later?

5. Will there be a division of responsibility for the performance of portions of specialty work or integrated systems that serve both construction under the existing contract and the new work? If so, will that division of responsibility adversely affect the University's ability to obtain corrections if deficiencies develop in either the existing or new work?
6. Will site conditions, storage, limited accessibility, or other conditions that affect the performance of the work tend to restrict bidder interest or increase potential costs should the new work be competitively bid?
7. Are the controlling elements of the proposed scope change incidental to the existing work? If they involve significantly different functions, programmatic features, or additions to the as-bid design, a change order is not appropriate.

It is the responsibility of the facility to maintain a written record as part of the contract file of the facts and conditions which justify the determination that the change order is justifiable in accordance with the factors above."

Although all of the criteria may have been considered in awarding the work, a written record was not properly maintained. Written justification for not using competitive bidding will result in improved compliance with the Facilities Manual.

Management Action Plan:

When a change order requires written justification of why it was not cost effective to competitively bid the work, a memo will be included in the project file explaining the circumstances. The Director of Operations will periodically review project files to verify that this documentation has been properly included. This action will be completed by June 30, 2012.