CAPITAL PROGRAMS

PROJECT MANAGEMENT

AUDIT REPORT #18-2102

Audit & Advisory Services

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Background

In accordance with the Campus fiscal year 2017-18 audit plan, Audit & Advisory Services (A&AS) conducted an audit of internal controls and business practices over key project management functions within the UCLA Capital Programs department.

*Capital Programs Overview*

The Capital Programs department is responsible for conceptualizing, planning, designing, and constructing major capital construction and renovation projects at UCLA. Projects having total costs of $750,000 and above are considered major capital construction. Capital Programs develops financial strategies, obtains project approvals, reviews plans and specifications, completes environmental reviews, prepares and negotiates construction contracts, coordinates staging plans, and serves as a repository for project records and as-built plans.

The department’s mission is to create projects that “support the instruction and research mission of the University by providing a physical campus environment that fosters excellence, creativity, and a sense of community.” Capital projects are developed to take into account UCLA land use priorities, established physical designs, University policies and procedures, environmental and regulatory requirements, and community interests.

The Capital Programs department consists of the following two areas:

*Capital Planning and Finance* – responsible for planning, environmental assessment, project budgeting, and project financial services including contracts administration. This area is led by an Associate Vice Chancellor who reports to the Vice Chancellor and Chief Financial Officer.

*Design and Construction* – responsible for project design, engineering, permitting and inspection services, project management, and construction management activities. This area is led by an Associate Vice Chancellor who reports to the Vice Chancellor and Chief Financial Officer.

*Project Management Services – Overview*

Project Managers (PMs) are accountable for achieving the established project scope of work within the approved budget and on time for their assigned Capital Programs projects. Additional responsibilities include liaisons with the campus community, building end-users, University administration, and regulatory agencies. During the planning, design and documentation phases, the PM may be responsible for orchestrating the efforts of outside design professionals (architects and engineers) and various consultants in the development of architectural programs, master plans, preliminary plans, working drawings and specifications. During the bid-award and construction phases, the PM is generally responsible for coordinating the efforts of contractors, construction managers, design professionals, and testing and inspection agencies. The PMs roles and responsibilities are broad and complex, can vary with each project, and are defined within the University of California (UC) Facilities Manual.

The Capital Programs Project Management Services unit consists of 11 PMs that report to the Project Management Services Director. The Director reports to the Associate Vice Chancellor of Design and Construction.

Purpose and Scope

The primary purpose of the review was to ensure that the Capital Programs organizational structure and controls surrounding its project management processes are conducive to accomplishing its business objectives. The secondary purpose of the review was to evaluate the adequacy and efficiency of internal controls. Where applicable, compliance with campus and University requirements were also evaluated.

The scope of the audit focused on the following areas:

* Change Orders
* Financial Management
* Monitoring of Project Budgets and Schedules

The review was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing* and included interviews, tests, and other procedures considered necessary to achieve the objective.

Summary Opinion

Based on the results of the work performed within the scope of the audit, Capital Programs Project Management Services unit’s organizational structure and controls are generally conducive to accomplishing its business objectives related to project management processes. However, controls and business practices could be further strengthened by implementing the following:

* When the Actual Cost Plus Contractor Fee method is used to determine the cost for changes in existing work, a field order with a “not-to-exceed” price limitation should be issued to the general contractor to direct any new work performed.
* Additive change orders (those with costs exceeding $100,000) should be adequately justified and documented in accordance with the UC Facilities Manual.
* Employee reimbursements for goods and/or services should be discouraged. However, when necessary, they should be limited to $500 as required by UCLA Policy 741, Low Value Orders.
* Vendor invoices should be delivered to and reviewed by PMs in a timely manner to help ensure timely payments to vendors and prevent any potential late fee charges.

The audit results and corresponding recommendations are detailed in the following sections of the report.

Audit Results and Recommendations

A sample of eight major capital construction and renovation projects managed by Capital Programs was judgmentally selected for this audit review. All selected projects were in the post-construction phase or nearing the end of construction, as of October 2017.

***Table 1***

|  |  |  |
| --- | --- | --- |
| **Project Number** | **Project Name** | **Approved Budget**  **(in Millions)** |
| 944020.02 | Geffen Hall | $105 |
| 940252.01 | Engineering VI - Phase 2 | $73 |
| 945905.01 | Jules Stein Seismic Correction & Program Improvement | $57 |
| 943971.01 | Wasserman Football Performance Center | $56 |
| 948490.01 | Geffen Academy | $42 |
| 947285.01 | Mo Ostin Basketball Center | $35 |
| 948794.01 | Clark Library Seismic Correction | $9 |
| 943974.01 | Botanical Garden Pavilion | $5 |

Source: Master Project Schedule, Capital Programs, October 2017.

Change Orders

The UC Facilities Manual describes contract modifications as changes to the work required during construction which can be accomplished through a change order (CO) or field order (FO). Specifically, per Volume 5, Chapter 13, *Contract Modifications*, a CO "is a post-award modification to the contract. A change order may revise, add to, or delete previous requirements of the work, adjust the contract sum, or adjust the contract time." An FO is “used only when (1) emergency conditions exist where life or property are endangered, (2) the extent of the work cannot be determined due to unknown conditions, or (3) a delay in proceeding with the work would affect the critical path and cause a delay to the entire Project. Field orders are not to be issued when the scope of the work and an estimated cost can be determined. A change order or a directed change order must be used instead.”

Interviews were conducted with Capital Programs personnel to obtain an understanding of departmental processes, procedures, and controls over the contract modification process.

*Contract Modification Process*

A change to the scope of work can be proposed by the general contractor or directed by the University. For a general contractor proposed change, a Request for Information (RFI) is issued by the general contractor to the University to collect written clarity on construction requirements, specifications, materials, etc. In the event of a University- initiated change, a Request for Estimate (RFE) is issued by the University to the general contractor to request a quote for the desired change. The RFI’s and RFE’s, after the exchange of information and if all parties agree to move forward, culminate into a Change Order Request (COR) completed by the general contractor.

The general contractor prepares a cost proposal and submits it to the University as part of the COR. The project’s University Representative (typically a Capital Programs construction manager) reviews the COR and, if in agreement with the proposal, formalizes the request into a CO. Per the UC Facilities Manual, the CO governs the contract modification. The CO is initially signed by the University Representative and sent to the General Contractor for their signature to confirm their agreement. Change order work is tracked via an RFI, RFE, COR, and CO. The return of an RFI by the University Representative to the General Contractor, with direction to proceed, indicates an acknowledgement of the clarification requested by the General Contractor and that it may be the initiation of a COR and ultimately a CO. The CO and associated supporting documents are reviewed and signed by the PM to evidence their recommendation for the CO to move forward. The Capital Programs accounting unit will then designate whether sufficient funds are available for changes to the contract sum (if any), the general contractor will document agreement to the CO, and finally the Associate Vice Chancellor of Design and Construction will document approval of the CO as delegated by the UC Regents.

The executed CO is then distributed to all relevant parties, and the original and supporting documentation is maintained in the project file.

1. Change Orders

Two executed COs from each sampled project were judgmentally selected for detailed audit testing (see 16 selected COs in Table 2 below). A&AS obtained and reviewed supporting documents for each CO including CORs, cost proposals, RFIs/RFEs, material costing documents, and labor time-cards, where applicable.

***Table 2***

|  |  |  |  |
| --- | --- | --- | --- |
| **Audit Sample** | **Project Name** | **Change Order Number** | **Change Order Cost** |
| 1 | Geffen Hall | 126 | $ 65,955 |
| 2 | Geffen Hall | 154 | $ 1,937 |
| 3 | Jules Stein Seismic Correction & Program Improvement | 304 | $ 38,504 |
| 4 | Jules Stein Seismic Correction & Program Improvement | 358 | $ 10,000 |
| 5 | Clark Library Seismic Correction | 141 | $ 12,000 |
| 6 | Clark Library Seismic Correction | 163 | $ 12,065 |
| 7 | Botanical Garden Pavilion | 5 | $ 4,016 |
| 8 | Botanical Garden Pavilion | 22 | $ 1,356 |
| 9 | Engineering VI - Phase 2 | 111 | $ 35,813 |
| 10 | Engineering VI - Phase 2 | 113 | $ 2,580 |
| 11 | Wasserman Football Performance Center | 79 | $ 45,685 |
| 12 | Wasserman Football Performance Center | 80 | $ 3,257 |
| 13 | Geffen Academy | 11 | $ 27,341 |
| 14 | Geffen Academy | 18 | $ 15,411 |
| 15 | Mo Ostin Basketball Center | 76 | $ 28,066 |
| 16 | Mo Ostin Basketball Center | 78 | $ (2,883) |

For three COs (#3, #5, and #6 in Table 2), Capital Programs did not properly use the Actual Cost Plus Contractor Fee costing method. While it was appropriate to use the costing method of Actual Cost Plus Contractor Fee in these cases, and records of daily time and materials were determined to be adequately maintained per UC policies, it was not appropriate for Capital Programs to direct the general contractor to work on changes without a FO.

Project Management Services personnel indicated that, in these three instances, the CO could not be executed before the work because the general contractor and the University could not determine nor agree on the cost and extent of work. As a result, the costing method of Actual Cost Plus Contractor Fee (also known as Cost of Extra Work plus Contractor Fee) was used, and the contractor was required to submit daily records of actual time and material costs to be compensated. Project Management Services personnel additionally explained that to prevent delay to the project schedules, the directive to proceed with work was given to the general contractor via a response to the RFI before a formalized CO could be executed.

Based on discussion with the UC Office of the President (UCOP) Director of Construction Services and review of UC policies and procedures, when using Actual Cost Plus Contract Fee costing method, an FO with a stipulated “not-to-exceed” price must be issued to the general contractor before work can be performed. As defined in the UC Facilities Manual, a CO or an FO are the only allowable mechanisms for contract modifications. The FO is used as a mechanism to formally direct the General Contractor to proceed with work whether agreed or not. A section of the General Construction contract is the General Conditions issued by the Office of the President which states:

Article 7.1.3 “A Field Order may be issued by University, does not require the agreement of Contractor, and shall be valid with or without the signature of Contractor.” Article 7.2.3 “A Field Order is a Contract Document issued by University that orders Contractor to perform Work.” Article 7.4.1.4 “if the Field Order states that it does constitute a change in the Work, the Field Order may or may not contain University’s estimate of adjustment of Contract Sum and/or Contract Time.” Article 7.4.2 “Upon receipt of a Field Order, Contractor shall promptly proceed to perform the Work as ordered in the Field Order notwithstanding any disagreement by Contractor concerning whether the Work is extra.” A FO will become a COR and then a CO to be payable under contract. An FO instructs the general contractor to proceed with the contract modification, and requires the contractor to properly document all costs. Also, an FO with a "not-to-exceed price" protects the University by specifying a limit to additional costs that can be incurred for the extra work.

Applicable policies and conditions are included in the UC Facilities Manual.

Recommendation: Management should ensure that an FO with a "not-to-exceed price" is issued to direct the general contractor to perform work when the Actual Cost Plus Contractor Fee costing method is used. An FO issued in accordance with UC policy will ensure that the general contractor properly follows procedures for documenting costs, strengthens controls over contract modifications, and protects the University by limiting additional costs for the extra work needed.

Response: Capital Programs uses a Field Order following the General Construction Contract (noted in Articles 7.1.3, 7..2.3, 7.4.1.4, and 7.4.2 above) as the ultimate directive to a General Contractor and is reserved for use only when a Contractor is objecting to proceed with a particular scope of work. Capital Programs reserves the Field Order as a contractual mechanism to formally direct the General Contractor to proceed with a scope of work whether agreed to or not.

We value the disciplined and measured use of the Field Order to send a very strong contract message and believe that its everyday use would dilute the power that this document can convey.

1. Additive Change Orders (Exceeding $100,000)

The UC Facilities Manual requires that COs exceeding $100,000 (“additive” COs), be advertised for competitive bidding. Otherwise, justification in support of the decision not to competitively bid must be documented. To determine whether additive COs were processed in accordance with the UC Facilities Manual, A&AS judgmentally selected one CO exceeding $100,000 from each of the eight sampled projects for detailed review. Upon further review, it was noted that one project did not have any individual additive COs, therefore, a total of seven additive COs were tested.

A&AS obtained and reviewed bid documentation or justification documentation for each of the seven COs selected. One of seven additive COs was competitively bid. Of the remaining six additive COs, four were sufficiently justified and pertinent documentation was properly maintained within project files.

However, for the remaining two additive COs, it was determined that justification for not competitively bidding was inadequate. The following was noted based on discussions held with Project Management Services personnel and review of supporting documents:

* For the Jules Stein Seismic Correction project, justification for CO #297 (cost of $870,570) was not documented. Project Management Services explained that the CO contains several plumbing changes from a sub-contractor combined as part of project closeout. At the time of CO execution, the PM thought that justification was not warranted since the CO consisted of several changes under the $100,000 threshold. Capital Programs management indicated that this CO was handled as part of a “consolidated close out” CO representing resolution of a collection of contractor issues negotiated to close out the construction contract. Since this was handled at project close out, Capital Programs stated that it was not feasible to consider competitive bidding; therefore, a CO justification was not prepared. Audit test work however did not disclose any specific reference within the applicable sections of the UC Facilities Manual that allows a collection of COs to be bundled in this manner for processing.
* For the Botanical Garden Pavilion project, justification for CO #3 (cost of $170,000) did not fully substantiate why competitive bidding was not performed. Instead, the documented justification described why a CO was needed. Justification documentation reviewed as part of audit testing stated, in full:

*"The Architect did not assess or detail correctly the shoring required to maintain proper distance from existing mature trees. In addition, the details for the shoring were not complete and were in conflict with the exterior wall constructability."*

Capital Programs management indicated that the CO justification for the Botanical Garden Pavilion conveys the issue that prevents this scope of work from being competitively bid, noting that the details for the shoring were not complete. In addition, department personnel explained that shoring is an activity that carries liability; it is not done piecemeal and would never be done by two contractors (a base scope contractor and a change work contractor). Project Management Services personnel further explained that competitive bidding would have adversely affected the project schedule.

While that would be a valid reason for not conducting an advertised bid, the scheduling factor was not documented as required by the UC Facilities Manual. Subsequent to briefing Capital Programs management about this issue, they indicated that a more explicit explanation of how shoring would impact the construction schedule would have improved and clarified the justification.

The UC Facilities Manual, Volume 5, Chapter 13, Section 13.2.7, *Guidelines for Substantial Change Orders* states that in order to execute an additive CO, it must be “convincingly demonstrated that no advantage would be gained by conducting an advertised bid for the work.” Also, the written justification should include the factors (such as those relating to cost and schedule) considered to support the decision not to competitively bid.

Recommendation: Capital Programs management should ensure that Project Management Services staff properly document justification when competitive bidding is not performed for additives COs. Also, management should consider periodically spot checking justification documents to ensure that the written justifications thoroughly meet UC standards.

Response: Management concurs with the finding and the Change Order Justification documentation format will be reinforced with all project managers and the project files spot checked periodically.

Financial Management

To ensure adherence to the approved budget and with funding source restrictions, PMs review and approve invoices for payment on their assigned projects. The PM signs and dates each invoice reviewed to evidence approval. After approval by the PM, the Capital Programs accounting unit processes the invoice for payment via BruinBuy.

Audit testing was performed to determine the adequacy of Capital Programs controls over disbursements. Using the eight sampled projects, A&AS judgmentally selected 30 disbursements (type entry 41 transactions) from the detailed general ledger. Supporting documents (invoices, BruinBuy detail, etc.) were reviewed to determine propriety of the expenditure, and compliance with applicable University policies and procedures. The following were noted:

1. Employee Reimbursements

In one instance, a transaction was determined to be an inappropriate reimbursement to the PM for the purchase of a vacuum cleaner for their project. Reimbursement to the PM exceeded the limit for employee reimbursements for goods and services as specified by UCLA Policy 741, Low Value Orders. The PM was reimbursed $1,099 for the purchase and shipping of the vacuum cleaner. Based on UCLA Policy 741, Section IV.C., *Reimbursements*, "The purchase of goods and/or services with an employee's personal funds and subsequent reimbursement is strongly discouraged, and as of August 1, 2010, is limited to $500 per transactions."

A&AS also noted that the PM appeared to approve the vendor invoice as a self-reimbursement, as evidenced by the PM's dated signature. After the PM’s approval, the Capital Programs accounting unit processed the reimbursement.

Recommendation: Management should ensure that employee reimbursements are limited to $500 per transaction as required by UCLA Policy 741. In addition, to strengthen internal controls in this area and maintain a strong segregation of duties, a qualified individual other than the PM should review and approve any reimbursements to a PM for propriety before processing the disbursement.

Response: Management concurs with the finding that was cited. This was a very unusual circumstance, and was viewed as an emergency response to mitigate potentially irreparable damage to the Clark Library’s Rare Book Collection. Upon further inquiry, it was confirmed that the PM had informed the accounting unit of the special circumstances prior to the approval of the vendor invoice.

1. Invoice Review and Approval

In six instances, transactions tested were not reviewed by the PM in a timely manner. UCLA Accounts Payable (AP) best practices suggest that vendor invoices be paid within 30 days. In these six instances, the delay between the invoice date and PM approval date ranged from 73 days to 225 days. Payment to the vendors was then further delayed because additional processing through the Capital Programs accounting unit and AP would still be required prior to payment.

The following observations were also noted with these six transactions:

* In one instance, the PM indicated that the invoice was initially addressed to the Capital Programs Project Planning unit and misplaced. As a result, the PM could not review the invoice in a timely manner.
* In two instances, the PM indicated that the invoice was not received by Capital Programs for unknown reasons; the PM became aware of the overdue invoice when the vendor inquired about payment on the invoice.
* In four instances, while no late fees appeared to be incurred or paid, vendor invoices stated that payment was due in 30 days and late payment could result in late fees.
* In one instance, the invoice was sent to UCLA AP but a copy was not remitted to the Capital Programs department or the PM. As a result, the PM could not review the invoice in a timely manner. Once received, the PM needed additional clarification from the vendor before approving the payment resulting in additional delay.

The Project Management Services Director indicated PMs are only responsible for reviewing and approving the payment once the invoice is physically received at the Capital Programs department.

Recommendation: Management should ensure that invoices are delivered to PMs in a timely manner to ensure an expedient payment to the vendors, and to prevent potential late fee charges.

Response: Capital Programs is acutely aware of our vendors cash flow requirements and makes every effort to provide timely reviews and approvals for payment of all invoices received. We have found that a small percentage of our vendors incorrectly route invoices to various individuals within Capital Programs which causes a delay in review and processing of the invoice. Additionally, we also have found that on occasion, vendors submit an invoice that is either incomplete or requires additional information which requires project manager to return, or hold the invoice until such time that there is concurrence by both parties that the invoice is complete ready for review and approval. Capital Programs management will review our instructions to vendors to assist in addressing this issue.

Pay Applications

Applications for payment are submitted by the general contractor on a monthly basis. The University Representative is the primary reviewer of the payment requests. By having primary responsibility for overseeing the construction project and general contractor, the University Representative is in the best position to verify the percentage of work reported as completed in the application. Through regular status meetings with the construction project team and visits of the job sites, the University Representative determines what work has been completed. Once the University Representative signs the application for payment, it is then forward to the PM for review and approval. The PM reviews for completeness of application and adequacy of supporting documents. Upon the PM’s approval, the application is sent to the Capital Programs accounting unit for payment.

Audit testing included review of the March 2017 applications for payment for all eight sampled Capital Programs projects. A&AS verified that the general contractor submitted an itemized cost breakdown to support the amount requested on the application, and that the Certificate for Payment was approved by the PM and the University Representative. Audit testing also included mathematically verifying that the required 5% retention amount was properly withheld as noted in the UC Facilities Manual.

There were no significant control weaknesses noted in this area.

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