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ABBREVIATIONS

BOT       Board of Trustees
CFO       Chief Financial Officer
CPDC      Capital Planning, Design and Construction
CRB       Certification Review Board
CSU       California State University
EO        Executive Order
ICSUAM    Integrated California State University Administrative Manual
Library   J. Paul Leonard/Sutro Library
OUA       Office of the University Auditor
SFSU      San Francisco State University
EXECUTIVE SUMMARY

At its January 2012 meeting, the Board of Trustees directed the Office of the University Auditor (OUA) to review construction activity. Construction auditing had been performed by KPMG since fiscal year 1997/98 with coordination from the OUA. In fiscal year 2008/09, OUA staff began performing construction audits.

We visited the San Francisco State University campus and the offices of the design-builder and selected subcontractors from July 9, 2012, through July 27, 2012, and audited the J. Paul Leonard/Sutro Library (Library) project focusing on the construction management policies and procedures and internal controls and processes in effect at that time.

Our study and evaluation did not reveal any significant construction management or internal control problems or weaknesses that would be considered pervasive in their effects on construction activity controls. However, we did identify other reportable weaknesses that are described in the executive summary and body of this report. In our opinion, the operational and administrative controls in effect for the Library project were sufficient to meet the overall audit objective stated below.

As a result of changing conditions and the degree of compliance with procedures, the effectiveness of controls changes over time. Specific limitations that may hinder the effectiveness of an otherwise adequate system of controls include, but are not limited to, resource constraints, faulty judgments, unintentional errors, circumvention by collusion, and management overrides. Establishing controls that would prevent all these limitations would not be cost-effective; moreover, an audit may not always detect these limitations.

The following summary provides management with an overview of conditions requiring attention. Areas of review not mentioned in this section were found to be satisfactory. Numbers in brackets [ ] refer to page numbers in the report.

CONSTRUCTION MANAGEMENT AND ACCOUNTING [6]

Certain design-builder monthly payment applications contained handwritten changes that created mathematical differences between supporting documentation submitted by the design-builder and the amount disbursed.

CHANGE ORDER ADMINISTRATION [7]

Change orders were not always approved according to authorized dollar thresholds. In addition, accounting records at both the design-builder and a trade subcontractor indicated the design-builder had underpaid the trade subcontractor resulting in an overcharge to the campus of $1,279. Further, a trade subcontractor applied excessive overhead and profit mark-ups. Finally, the design-builder did not reimburse the campus $4,800 for an inflated labor burden rate for federal unemployment contributions credited to the design-builder by a trade subcontractor, and did not verify the liability insurance rate for another trade subcontractor.
INTRODUCTION

BACKGROUND

The J. Paul Leonard Library was constructed in three phases in 1953, 1959, and 1971. Since the last expansion, enrollment at San Francisco State University (SFSU) has increased from 16,000 to more than 29,000 students, and the facility was providing only 68 percent of the library space required for a campus of its size. In 1982, the Sutro Library, the San Francisco branch of the California State Library and the largest genealogical library west of Salt Lake City, Utah, was relocated to the SFSU campus. In January 2004, the Board of Trustees (BOT) approved schematic plans for the SFSU J. Paul Leonard/Sutro Library (Library) project at a cost of $99,595,000, to be funded by the governor’s 2002 Economic Stimulus Package and future bond measures.

In June 2007, the campus solicited project proposals and selected Douglas E. Barnhart, Inc., as the design-builder. The campus executed a design and construction agreement with Douglas E. Barnhart, Inc., on April 23, 2008, at a cost of $98,499,994. It issued the Notice to Proceed on the same day, with a completion date of July 25, 2011, which was subsequently extended to April 8, 2012. The campus received a Certificate of Occupancy on January 19, 2012, and filed a Notice of Completion on March 2, 2012.

The Library project, completed in two phases, included the construction of a 155,037-square-foot addition and the renovation of the existing 272,088-square-foot building. The six-story addition was built on the site of the Franciscan Building, which was demolished during phase one of the project. The addition includes a deep basement, which houses an automated retrieval system for the Library’s collection of books. The renovation work joined the three separate buildings of the existing library, increased seismic reinforcement, and corrected building code deficiencies. In addition, new service towers were built to provide code-compliant exit stairs, mechanical shafts, and structural shear walls.

The SFSU campus managed the Library project, and it chose the Design-Build delivery method. In this method, the design and construction aspects are contracted with a single design-builder who has full responsibility for finalizing and implementing a design that meets or exceeds California State University’s (CSU) performance expectations. The design-build entity is responsible for the adequacy of design and any construction defects, which allows the CSU to avoid these types of claims and limits errors and omissions change orders. Further, the design-build approach shortens project completion by overlapping the design and construction project phases. This approach also minimizes the university’s need to schedule and coordinate the overall project, although clear specifications of CSU performance requirements and high-quality inspection of work in progress are required to fully realize the benefits of this approach.

Executive Order (EO) 672, Delegation of Capital Outlay Management Authority and Responsibility, dated July 25, 1997, delegates to campus presidents the authority to manage directly state and non-state funded capital outlay projects. The chancellor’s office issues this delegated authority to the campus subject to its compliance with the capital outlay certification procedure. To comply, the campus submits a request for Delegation of Capital Outlay Management Authority to the Certification Review Board (CRB) for review. Then the executive vice chancellor and chief financial officer in the chancellor’s office must approve the request. The campus president is responsible for ensuring that he or she
exercises delegated authority in compliance with applicable statutes, regulations, and policies of the BOT; the campus manages capital projects via a process consistent with the provisions of the Integrated California State University Administrative Manual (ICSUAM); and the campus has in place appropriate internal controls and processes to ensure that responsibilities are carried out in a manner consistent with the campus capital outlay management plan submitted with the request for delegated authority.

The certification procedure required by EO 672 includes submission of a capital outlay management plan, which defines the campus organizational and operational structure and expenditure authority, and serves as the campus policies and procedures for the administration of construction activities. Updated plans are to be submitted when campus operational structure changes are made which impact the plan. Certification is continuous unless a Capital Planning, Design and Construction (CPDC) post-project performance review determines that problems were caused by campus negligence, in which case the CRB may recommend that the campus be placed on probation. The CRB may ultimately recommend that certification be withdrawn if identified operational/management deficiencies are not remedied.

For those campuses that are not certified, the chancellor’s office may execute a Memorandum of Delegation for a capital outlay project, which delegates administration, including construction management, to the campus. The CPDC construction management unit may also perform construction administration and management.

EO 666, Delegation of Professional Appointments Related to Capital Outlay Projects and Campus Physical Development, dated March 7, 1997, delegates the authority to each campus president or designee to make all professional appointments relative to capital outlay projects and campus physical development. Further, the campus president or designee is responsible for ensuring compliance with all applicable statutes and regulations, BOT policies, and ICSUAM guidelines; and the use of systemwide standardized architectural, engineering, and other professional appointment contract forms.

The ICSUAM, in part, contains an overview of all CPDC policies and procedures associated with the capital outlay process. ICSUAM §9700 through §9843, Construction Management for Public Works Contracts, describe the requirements for preparing and administering public works contracts under the provisions of Public Contract Code §10700 et seq. ICSUAM §9200 through §9212, Professional Services for Campus Development, describe the requirements for developing and administering professional services agreements with service providers such as architects and engineers and for testing services and project-related studies.

The CSU Construction Management Procedures Manual contains the CSU construction management policies and procedures that apply to a project, and each construction administrator, project manager, inspector of record, campus representative, and design professional is required to use this manual as appropriate during the construction administration of a project.
PURPOSE

The overall audit objective was to ascertain the effectiveness of construction management policies and procedures and internal controls and processes related to the administration of construction activities and, specifically, the Library project.

Within the overall audit objective, specific goals included determining whether:

- Delegated authority to manage capital outlay projects exists, and the campus capital outlay management plan is current for campus-managed projects.
- Project development is in accordance with statutory and CSU policy requirements, including required BOT and CPDC approvals.
- Administration and management of the project provide effective internal controls and processes consistent with the campus capital outlay management plan and the ICSUAM.
- Professional appointments are in accordance with statutory requirements, BOT policy, and the ICSUAM; and systemwide standardized professional appointment contract forms are used, approved by the Office of General Counsel, and fully executed prior to performance of work.
- Extra services are appropriate, authorized, and separately tracked; and an evaluation is performed for each professional service provided.
- The bidding process is rigidly controlled, performed in accordance with statutory requirements and the ICSUAM, and incorporates the contract documents maintained on the CPDC website.
- Contract documents are complete, routed to the Office of General Counsel as appropriate, and timely executed; required contract bonds and insurance are received; and a Notice to Proceed is issued.
- Subcontractors are adequately monitored, and requests for subcontractor substitutions are handled in accordance with statutory requirements and the ICSUAM.
- Operational and administrative controls ensure maintenance of financial accountability and completion of the project within the approved scope, schedule, and budget.
- Contract and service agreement payments are adequately supported, appropriately approved, and timely paid; and retention is handled in accordance with statutory requirements and the ICSUAM.
- Purchased materials meet specifications required by construction documents and drawings, and all required inspections and tests are timely and properly performed and adequately documented.
INTRODUCTION

- Change orders are appropriately approved, supported, accurately priced, and sufficiently tracked; and construction allowances and contingency balances are adequately administered and controlled.

- Project completion is adequately administered, including completion of pre-final/final inspections, punch list items, project closeout checklist, and Notice of Completion; preservation of project files, equipment manuals/warranties, and spare parts/materials; and resolution of any liquidated damages.

SCOPE AND METHODOLOGY

The scope of audit included, but was not limited to, the review of design budgets and costs; the bid and award process; invoice processing and payment; change orders; construction management, architectural, and engineering services; use of major equipment/materials; the closeout process; administration of liquidated damages; and overall project cost accounting and reporting. This included any transactions or activity performed by the campus, construction management firm, and trade subcontractors.

Our study and evaluation were conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* issued by the Institute of Internal Auditors, and included the audit tests we considered necessary in determining that operational and administrative controls are in place and operative. This review emphasized, but was not limited to, compliance with state and federal laws, BOT policies, and Office of the Chancellor and campus policies, letters, and directives.

We focused primarily on the operational and administrative controls in effect for the Library project with an emphasis on compliance with the CSU *Construction Management Procedures Manual*, ICSUAM policies and procedures associated with the capital outlay process, the campus capital outlay management plan, and construction contract general conditions. We evaluated the effectiveness of construction management policies and procedures and adequacy of internal controls and processes, and sought opportunities for improvement to further the success of CSU’s capital outlay program.

Specifically, we reviewed and tested:

- Delegation of construction management authority.
- Review and approval of project design, budget, and funding.
- Professional services agreements and any extra services changes.
- Administration of the bid and award process.
- Contract execution and required contract bonds and insurance.
- Subcontractors and subcontractor substitutions.
- Contract and service agreement payment processing.
- Procurement of major equipment and materials.
- Performance of required inspections and tests.
- Review, approval, and tracking of change orders.
- Direct labor and associated burden.
- Construction management and overall project cost accounting and reporting.
- Construction allowances and contingency balances.
- Administration of the project closeout process and resolution of any liquidated damages.
CONSTRUCTION MANAGEMENT AND ACCOUNTING

Administration of design-builder monthly payment applications needed improvement.

We reviewed 56 payment applications, and we found that on 33 applications, mathematical errors in the amounts disbursed to the design-builder had been corrected by hand. In each case, these changes created mathematical differences between supporting documentation submitted by the design-builder and the amount disbursed. In addition, none of these changes were initialed by all required approvers to indicate their concurrence.

Public Contract Code §10853 (b) states that each payment request shall be reviewed by the Trustees as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request. Any payment request determined not to be a proper request suitable for payment shall be returned to the contractor as soon as practicable, but no later than seven days after receipt.

The associate vice president of capital planning, design and construction (CPDC) stated that the campus reviewed all payment applications and noted the differences between the amounts requested by the design-builder and amounts paid, and it determined that the differences were immaterial. He also stated that in each instance, the amount paid by the campus was less than what was requested by the design-builder. He further stated his belief that timely payment of approved invoice amounts to campus contractors was necessary to maintain job progress.

Inadequate administration of design-builder monthly payment applications may result in unwarranted changes and reconciliation issues between campus and design-builder project accounting records and increases the risk that errors and irregularities will not be detected.

Recommendation 1

We recommend that the campus reiterate to staff that design-builder monthly payment applications should be free of mathematical errors. If errors are detected, the campus should return the payment request to the design-builder, who should then submit a revised payment application.

Campus Response

The campus will advise staff via memo that the contractor monthly invoice should be free of mathematical errors, and if errors are detected, staff should direct the contractor to submit a corrected invoice for payment.

Estimated completion date: November 30, 2012
CHANGE ORDER ADMINISTRATION

APPROVALS

Change orders were not always approved according to authorized dollar thresholds.

Specifically, we found that ten change orders were not approved by the vice president and chief financial officer (CFO) for administration and finance, as required by the campus delegation of authority.

The San Francisco State University Delegation of Capital Outlay Management Authority, dated March 2007 and July 2008, states that approval by the vice president and CFO for administration and finance is required for change items exceeding $100,000.

The California State University (CSU) Construction Management Project Administration Reference Manual §4.05c states that the construction administrator (associate director of planning and administration) shall review each contract change order for conformance to the approved change proposal(s) and review all attached backup for completeness and conformance to contract specification. The contract manager shall sign all change orders not exceeding $50,000 (per the campus capital outlay management plan). If there are multiple change items on a single change order, the construction manager may sign the change order only if the absolute value of each separate item listed on the change order does not exceed his/her authority. If one or more of the items exceeds the construction manager’s signature authority, the construction manager must secure a signature from someone with a higher level of signature authority (i.e., the associate vice president of CPDC for changes between $50,001 and $100,000 and/or the vice president and CFO for administration and finance for changes exceeding $100,000).

The CPDC associate vice president stated that the vice president at the time of construction was aware of all large change proposal items. He further stated that the previous vice president approved several of the items noted via email, and the change order face sheets were not signed due to oversight.

Inadequate approval of change orders increases the risk that errors and irregularities will not be detected in a timely manner and may result in unwarranted changes and excess charges and expenses.

Recommendation 2

We recommend that the campus reiterate to staff that change orders must be approved according to authorized dollar thresholds.
Campus Response

The campus will reiterate to staff that change orders must be approved according to authorized dollar thresholds.

Estimated completion date: November 30, 2012

SUBCONTRACTORS

Design-builder accounting records did not always agree to change orders submitted to the campus.

We reviewed a sample of change orders submitted by the design-builder and found an underpayment to one trade subcontractor. The design-builder’s change order documentation detailed costs of $1,279 incurred by the trade subcontractor; however, accounting records at both the design-builder and trade subcontractor indicated that the trade subcontractor was not reimbursed for these costs. This lack of payment resulted in an overcharge to the campus of $1,279.

The Contract General Conditions for Design-Build Projects §37.01.b (5) states that for any portion of the changed work which is to be performed by a subcontractor (any tier), the design-builder shall furnish to the Trustees a detailed estimate prepared and signed by the subcontractor of the cost to subcontractor for performing the changed work.

The CPDC associate vice president stated his belief that the campus performed its due diligence by reviewing change order documentation submitted to the campus; however, payments to trade subcontractors were not part of this review.

Failure to ensure that design-builder accounting records agree to change orders submitted to the campus increases the risk that errors and irregularities will not be detected and may result in increased project costs.

Recommendation 3

We recommend that the campus pursue recovery of the $1,279 overcharge. The results of this recovery should be reported to the chancellor’s office CPDC department.

Campus Response

The campus has requested reimbursement for the $1,279 overcharge.
MARK-UPS

Administration of trade subcontractor overhead and profit mark-ups needed improvement.

We reviewed overhead and profit mark-ups applied by a trade subcontractor and found four instances in which the trade subcontractor applied a 7 percent mark-up on a second-tier subcontractor’s cost that included a 15 percent overhead and profit mark-up.

The Contract General Conditions for Design-Build Projects §37.01b (4) states that the mark-ups on the direct cost of change work include all incidental overhead support costs and profit. No mark-up on mark-up is permitted.

The CPDC associate vice president stated that the failure to review the trade subcontractor mark-ups was due to oversight.

Failure to review trade subcontractor mark-ups increases the risk that errors and irregularities will not be detected and may result in increased project costs.

Recommendation 4

We recommend that the campus conduct staff training to ensure that trade subcontractor mark-ups are appropriate and accurate in accordance with §37.00, Changes in the Work, of the Contract General Conditions for Design-Build Projects.

Campus Response

The campus will conduct staff training on §37.00, Changes in the Work, of the Contract General Conditions for Design-Build Projects.

Estimated completion date: November 30, 2012

LABOR RATES AND BURDEN

Administration of trade subcontractor labor rates and associated labor burden needed improvement.

We reviewed hourly labor rates and the associated labor burden charged by two trade subcontractors for change order work, and we found that:

- One trade subcontractor submitted a $4,800 credit change order to the design-builder to reimburse the campus for an inflated labor burden rate for federal unemployment contribution, but the design-builder did not reimburse the campus for this error.
- The campus had not verified the liability insurance rate for one trade subcontractor, and the trade subcontractor could not provide sufficient documentation supporting the rate included in its change order labor rate.
The *Contract General Conditions for Design-Build Projects* §37.01b (1) states that costs are allowed for the actual payroll costs to the builder for labor, field supervision of changed work, and engineering or technical services directly required for the performance of the changed work. Costs include payments, assessments, or benefits required by lawful labor union collective bargaining agreements, compensation insurance payments, liability insurance premiums on labor only, contributions made to the state pursuant to the Unemployment Insurance Code, and for taxes paid to the federal government required by the Social Security Act.

The CPDC associate vice president stated that he was unaware of the credit submitted by the trade subcontractor. He further stated his belief that the design-builder should have reviewed the labor rate and labor burden components before submitting the change orders to the campus. Failure to ensure that hourly labor rates and associated labor burden are accurate may result in increased project costs.

**Recommendation 5**

We recommend that the campus:

a. Pursue recovery of the $4,800 overcharge. The results of this recovery should be reported to the chancellor’s office CPDC department.

b. Conduct staff training to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurately reviewed in accordance with §37.00, Changes in the Work, of the *Contract General Conditions for Design-Build Projects*.

**Campus Response**

The campus has:

a. Requested reimbursement of the $4,800 overcharge on subcontractor labor burden rate.

b. Conducted staff training to ensure that hourly labor rates and associated labor burden charged comply with applicable *Contract General Conditions for Design-Build Projects*. 
# APPENDIX A:
## PERSONNEL CONTACTED

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td><strong>Office of the Chancellor</strong></td>
<td></td>
</tr>
<tr>
<td>Elvyra San Juan</td>
<td>Assistant Vice Chancellor, Capital Planning, Design and Construction</td>
</tr>
<tr>
<td><strong>San Francisco State University</strong></td>
<td></td>
</tr>
<tr>
<td>Leslie E. Wong</td>
<td>President (Currently)</td>
</tr>
<tr>
<td>Robert A. Corrigan</td>
<td>President (At time of review)</td>
</tr>
<tr>
<td>Taver Chong</td>
<td>Associate Internal Auditor</td>
</tr>
<tr>
<td>Roger Fish</td>
<td>Director, Capital Planning, Design and Construction</td>
</tr>
<tr>
<td>Nancy Hayes</td>
<td>Vice President and Chief Financial Officer, Administration and Finance</td>
</tr>
<tr>
<td>Simon Lam</td>
<td>Associate Vice President, Capital Planning, Design and Construction</td>
</tr>
<tr>
<td>Marilyn Lanier</td>
<td>Senior Associate Vice President, Physical Planning and Development</td>
</tr>
<tr>
<td>Heather Boshears Robbins</td>
<td>Internal Auditor</td>
</tr>
<tr>
<td>Agnes Wong-Nickerson</td>
<td>Associate Vice President, Fiscal Affairs</td>
</tr>
</tbody>
</table>
November 5, 2012

Larry Mandel
University Auditor
The California State University
lmandel@calstate.edu

Dear Larry:

We have received Audit Report #12-13, Construction from your office and are providing our responses to the recommendations electronically. Documentation demonstrating implementation of recommendations will be sent to you separately.

Please direct questions regarding the responses to Nancy K. Hayes, Vice President & CFO, Administration & Finance, at 415-338-2521 or Heather Boshears Robbins, Internal Auditor, at 415-405-4343.

Sincerely,

Dr. Les Wong
President

HBR/2d

Attachment

cc: Nancy K. Hayes, Vice President & CFO, Administration & Finance
    Heather Boshears Robbins, Internal Auditor
CONSTRUCTION
SAN FRANCISCO STATE UNIVERSITY
J. PAUL LEONARD/SUTRO LIBRARY
Audit Report 12-13

CONSTRUCTION MANAGEMENT AND ACCOUNTING

Recommendation 1

We recommend that the campus reiterate to staff that design-builder monthly payment applications should be free of mathematical errors. If errors are detected, the campus should return the payment request to the design-builder, who should then submit a revised payment application.

Campus Response

The campus will advise staff via memo that the contractor monthly invoice should be free of mathematical errors, and if errors are detected staff should direct the contractor to submit a corrected invoice for payment.

Estimated completion date: November 30, 2012

CHANGE ORDER ADMINISTRATION

APPROVALS

Recommendation 2

We recommend that the campus reiterate to staff that change orders must be approved according to authorized dollar thresholds.

Campus Response

The campus will reiterate to staff that change orders must be approved according to authorized dollar thresholds.

Estimated completion date: November 30, 2012
SUBCONTRACTORS

Recommendation 3

We recommend that the campus pursue recovery of the $1,279 overcharge. The results of this recovery should be reported to the chancellor’s office CPDC department.

Campus Response

The campus has requested reimbursement for the $1,279 overcharge.

MARK-UPS

Recommendation 4

We recommend that the campus conduct staff training to ensure that trade subcontractor mark-ups are appropriate and accurate in accordance with §37.00, Changes in the Work, of the Contract General Conditions for Design-Build Projects.

Campus Response

The campus will conduct staff training on §37.00, Changes in the Work, of the Contract General Conditions for Design-Build Projects.

Estimated completion date: November 30, 2012

LABOR RATES AND BURDEN

Recommendation 5

We recommend that the campus:

a. Pursue recovery of the $4,800 overcharge. The results of this recovery should be reported to the chancellor’s office CPDC department.

b. Conduct staff training to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurately reviewed in accordance with §37.00, Changes in the Work, of the Contract General Conditions for Design-Build Projects.

Campus Response

The campus has requested reimbursement of the $4,800 overcharge on sub-contractor labor burden rate. The campus has conducted staff training to ensure that hourly labor rates and associated labor burden charged comply with applicable Contract General Conditions for Design-Build Projects.
November 28, 2012

MEMORANDUM

TO: Mr. Larry Mandel
   University Auditor

FROM: Charles B. Reed
       Chancellor

SUBJECT: Draft Final Report 12-13 on the
         J. Paul Leonard/Sutro Library,
         San Francisco State University

In response to your memorandum of November 28, 2012, I accept the response as submitted with the draft final report on the J. Paul Leonard/Sutro Library, San Francisco State University.

CBR/amd