CONSTRUCTION

CALIFORNIA STATE UNIVERSITY,
SAN MARCOS

SOCIAL AND BEHAVIORAL SCIENCES BUILDING

Audit Report 11-16
April 11, 2012

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ABBREVIATIONS

A/E Architect/Engineer
BOT Board of Trustees
CPDC Capital Planning, Design and Construction
CRB Certification Review Board
CSU California State University
CSUSM California State University, San Marcos
ESA Extra Service Authorization
EO Executive Order
LEED Leadership in Energy and Environmental Design
OUA Office of the University Auditor
PDC Planning, Design and Construction
SBSB Social and Behavioral Science Building
SUAM State University Administrative Manual
EXECUTIVE SUMMARY

At its January 2010 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 California State University, San Marcos campus and the offices of the construction manager and selected subcontractors from November 28, 2011, through January 6, 2012, and audited the Social and Behavioral Sciences Building (SBSB) 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 SBSB 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.

PROJECT DEVELOPMENT AND DESIGN [7]

One extra service authorization letter for $56,000 authorizing additional inspection and testing work was executed after the specified services were performed.

CHANGE ORDER ADMINISTRATION [7]

Change order cost did not always match supporting documentation. Specifically, one trade subcontractor mistakenly added deductible costs, inflating costs by $978. In addition, erroneous labor hours and associated labor burden overcharges by two trade subcontractors inflated labor costs by $1,743.

PROJECT COMPLETION AND CLOSEOUT [9]

The campus prepared and signed the Notice of Completion on July 6, 2011, three months prior to the completion of the certification of completion and six months prior to the completion of project closeout checklist.
INTRODUCTION

BACKGROUND

In May 2007, the Board of Trustees (BOT) approved schematic plans for the California State University, San Marcos (CSUSM) Social and Behavioral Sciences Building (SBSB) at a project cost of $55,001,000, with $52,322,000 of funding from the fiscal year 2007/08 Governor's Budget and $1,078,000 from the Higher Education Capital Outlay Bond Fund of 2006. Due to lower than estimated construction costs, the campus returned $16,558,000 of unexpended appropriations to the Department of Finance in April 2009.

In July 2007, the campus executed a contract with the architectural firm of AC Martin Partners, Inc., to provide services related to, and incidental to, design and construction of the project. In November 2008, the campus solicited project bids and selected Edge Development Inc. as the general contractor. The campus issued the Notice to Proceed on December 10, 2008, and executed an agreement with the general contractor at a construction cost of $27,656,007. The campus received a Certificate of Occupancy on May 3, 2011, and filed the Notice of Completion on July 6, 2011.

The SBSB was engineered with a steel-braced frame structure and includes a three-story faculty office wing and a four-story classroom/laboratory wing. The facility houses computer laboratories, classrooms, support spaces, and faculty offices for psychology, sociology, human development, communication, liberal studies, economics, political science, and anthropology academic programs. The two wings of the building share a small courtyard that opens to the south for academic events. The campus utility tunnel was extended to serve this building, and all utilities were continued to the building from adjacent locations. A permanent fire access and service road was constructed on the east side of the building to connect to the existing service road. Sustainable building features include a space configuration that locates most offices, classrooms, and laboratories along exterior walls, allowing day lighting; an automated light control system with occupancy sensors; and windows with double-glazing and low emission coatings. Shades provide solar control, and clerestory windows are located high on inboard offices to bring natural light into the center spaces. An energy-efficient mechanical system with variable air volume controls tied to the campus central plant further reduces the building’s energy consumption, and heat absorption is minimized with a cool roof. The project achieved a Leadership in Energy and Environmental Design (LEED) silver rating. LEED is a third-party certification program begun in 1999 by the United States Green Building Council and is a nationally accepted benchmark for the sustainable “green” design, construction, and operation of buildings.

The CSUSM campus managed the SBSB project, and it chose the Design-Bid-Build delivery method. In this method, the design and construction aspects are contracted for separately, and the project is usually awarded to the lowest bid by a qualified general contractor. The architect/engineer (A/E) develops a schematic design, works with other professionals to complete drawings and specifications, and coordinates the bid documents. The project is advertised and bids are requested for various general contractors, who in turn bid out subcomponents of the project to multiple subcontractors and compile a complete bid for submission. The A/E participates in bid review and selection. During the construction phase, the A/E reviews work progress and issues site instructions, change orders, and other documentation necessary to the construction process; and the general contractor manages the construction process and daily activity on the construction site and often provides work with its own
forces. The university remains responsible for project inspection and testing, and for generally administering the project.

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 State University Administrative Manual (SUAM); 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 SUAM guidelines; and the use of systemwide standardized architectural, engineering, and other professional appointment contract forms.

The SUAM, in part, contains an overview of all CPDC policies and procedures associated with the capital outlay process. SUAM §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.* SUAM §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 California State University (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.
INTRODUCTION

**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 SBSB 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 SUAM.
- Professional appointments are in accordance with statutory requirements, BOT policy, and the SUAM; 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 SUAM, 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 SUAM.
- 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 SUAM.
- Equipment is procured in the most economical method; purchased materials meet specifications required by construction documents and drawings; and all required inspections and tests are timely and properly performed and adequately documented.
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 SBSB project with an emphasis on compliance with the CSU *Construction Management Procedures Manual*, SUAM 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.
OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

PROJECT DEVELOPMENT AND DESIGN

One extra service authorization (ESA) letter for $56,000 authorizing additional inspection and testing work was executed after the specified services were performed.

State University Administrative Manual (SUAM) §9208.02 states that extra services for professional service agreements call for the provision of services to be authorized in writing in advance.

The planning, design and construction (PDC) director stated that the ESA letter was not executed in a timely manner due to field change activities created by the general contractor. He further stated that the general contractor needed additional inspections to meet schedule requirements, and the inspection service vendor provided proposals after starting the work.

The absence of complete ESA letters increases the risk of misunderstandings and miscommunication regarding rights and responsibilities.

Recommendation 1

We recommend that the campus reiterate to staff that ESA letters are to be executed prior to the performance of the specified services.

Campus Response

The campus will reiterate to staff that ESA letters are to be executed prior to the performance of the specified services. The campus will provide training to all staff and project management consultants on how to track and prevent such occurrences.

Anticipated completion date: September 3, 2012

CHANGE ORDER ADMINISTRATION

DOCUMENTATION

Change order costs did not always match supporting documentation.

We reviewed change order documentation for a sample of change orders and found that one subcontractor erroneously added deductible costs when calculating the total amount of a change order. The inclusion of this erroneous cost increased the total cost for this trade subcontractor by $978.
The *Contract General Conditions for Design-Bid-Build Projects* §6.01.b states, in part, that in submitting a change order request, the contractor affirms that the cost is submitted in good faith, that the cost is accurate, and is in accordance with provisions of the contract requirements.

The PDC director stated that the campus utilized a third-party construction management firm, which should have been reviewing the change order documentation before submitting the change orders to the campus.

Failure to adequately review change order documentation may result in increased project costs.

**Recommendation 2**

We recommend that the campus pursue recovery of the $978 overcharge charged by the trade subcontractor. The results of this recovery should be reported to the chancellor’s office Capital Planning, Design and Construction (CPDC) department.

**Campus Response**

The campus will, under the direction of campus general counsel, pursue recovery of the $978 overcharge charged by the trade subcontractor. Results of this recovery will be reported to the chancellor’s office CPDC department.

Anticipated completion date: September 3, 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 burden charged by two trade subcontractors for a sample of change orders, and we found that:

- One trade subcontractor included an erroneous labor burden for small tools provided to employees. This increased labor costs by $1,003.

- A second trade subcontractor erroneously added 14 additional journeymen hours when calculating the total amount of a change order. This error created an overcharge of $740.

The *Contract General Conditions for Design-Bid-Build Projects* §6.01.b (1) states that the contractor shall submit a fully detailed breakdown of the cost of every labor classification to be utilized on a proposed change on the hourly labor rate worksheet. The unit cost of labor shall be an accurate accounting of actual costs being paid.

The PDC director stated that the campus utilized a third-party construction management firm, which should have been reviewing the labor costs submitted on change orders against the hourly labor rates and hours before submitting the change orders to the campus.
Failure to ensure that hourly labor rates and the associated labor burden are correct may result in increased project costs.

**Recommendation 3**

We recommend that the campus:

a. Pursue recovery of the $1,743 overcharge charged by the trade subcontractors and determine, as appropriate, if other change order work performed by these trade subcontractors had been cost-inflated in a similar manner. 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 accurate in accordance with §6.00, Changes in the Work, of the *Contract General Conditions for Design-Bid-Build Projects*.

**Campus Response**

a. The campus will, under the direction of campus general counsel, pursue recovery of the $1,743 overcharge charged by the trade subcontractors. The campus will determine if other change order work performed by these trade subcontractors had been cost-inflated in a similar manner. Results of this recovery will be reported to the chancellor’s office CPDC department.

b. The campus will conduct staff and project management consultant training to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurate in accordance with §6.00, Changes in the Work, of the *Contract General Conditions for Design-Bid-Build Projects*.

Anticipated completion date: September 3, 2012

**PROJECT COMPLETION AND CLOSEOUT**

Administration of project completion and closeout needed improvement.

We found that the campus prepared and signed the Notice of Completion on July 6, 2011, three months prior to the completion of the certification of completion and six months prior to the completion of the project closeout checklist.

SUAM §9830 states that the process for inspection and acceptance of completed contract work includes a pre-final inspection of construction, which may include preparation of a punch list for any deviations or delinquencies in the work, and a final inspection, which includes completion of the project closeout checklist and certification of completion by the designer/architect, project manager/construction inspector, and construction administrator. Upon completion, the construction
administrator files a Notice of Completion with the county recorder of the county where the project is located.

The PDC director stated that the Notice of Completion was filed within 10 days of the final labor being performed, as required by California lien laws, and that this occurred before the certificate of completion and project closeout checklist were completed. He further stated that if the Notice of Completion had been filed after the certificate of completion, the campus would have been at risk of a longer lien closeout period.

Failure to complete the project closeout checklist and certification of completion prior to filing the Notice of Completion increases the risk of misunderstandings and miscommunication regarding rights and responsibilities.

**Recommendation 4**

We recommend that the campus reiterate to staff that the project closeout checklist and certification of completion should be prepared prior to filing the Notice of Completion.

**Campus Response**

The campus will reiterate to staff that the project closeout checklist and certification of completion should be prepared prior to filing the Notice of Completion. The campus will provide training to all staff and project management consultants on how to track and prevent such occurrences.

Anticipated completion date: September 3, 2012
### 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>California State University, San Marcos</strong></td>
<td></td>
</tr>
<tr>
<td>Karen S. Haynes</td>
<td>President</td>
</tr>
<tr>
<td>Candace Bebee</td>
<td>Assistant to the Vice President, Finance and Administrative Services</td>
</tr>
<tr>
<td>Gary Cinnamon</td>
<td>Associate Vice President, Facilities Development and Management</td>
</tr>
<tr>
<td>Brad Fenton</td>
<td>Director, Planning Design and Construction</td>
</tr>
<tr>
<td>Linda Hawk</td>
<td>Vice President, Finance and Administrative Services</td>
</tr>
<tr>
<td>Katy Rees</td>
<td>Assistant Vice President, Administration</td>
</tr>
<tr>
<td>Melinda Thurmond</td>
<td>Project Manager, Planning Design and Construction</td>
</tr>
<tr>
<td>Randy Woods</td>
<td>Inspector of Record, Planning Design and Construction</td>
</tr>
</tbody>
</table>
April 20, 2012

Mr. Larry Mandel
University Auditor
The California State University
401 Golden Shore
Long Beach, CA 90802

Subject: Campus Response to Audit Report 11-16, Social and Behavioral Sciences Building
California State University San Marcos

Dear Mr. Mandel:

Enclosed is our campus response to the four recommendations in Audit Report 11-16, Social and Behavioral Sciences Building. We anticipate sending our supporting evidence no later than September 3, 2012.

Please let us know if you have any questions or need additional information.

Sincerely,

Linda Hawk
Vice President
Finance and Administrative Services

Attachment

c: President Karen S. Haynes
CONSTRUCTION

CALIFORNIA STATE UNIVERSITY,
SAN MARCOS

SOCIAL AND BEHAVIORAL SCIENCES BUILDING

Audit Report 11-16

PROJECT DEVELOPMENT AND DESIGN

Recommendation 1

We recommend that the campus reiterate to staff that ESA letters are to be executed prior to the performance of the specified services.

Campus Response

The campus will reiterate to staff that ESA letters are to be executed prior to the performance of the specified services. The campus will provide training to all staff and project management consultants on how to track and prevent such occurrences.

Anticipated completion date: September 3, 2012

CHANGE ORDER ADMINISTRATION

DOCUMENTATION

Recommendation 2

We recommend that the campus pursue recovery of the $978 overcharge charged by the trade subcontractor. The results of this recovery should be reported to the chancellor’s office Capital Planning, Design and Construction (CPDC) department.

Campus Response

The campus will, under the direction of Campus General Counsel, pursue recovery of the $978 overcharge charged by the trade subcontractor. Results of this recovery will be reported to the Chancellor’s Office Capital Planning, Design and Construction (CPDC) department.

Anticipated completion date: September 3, 2012
LABOR RATES AND BURDEN

Recommendation 3

We recommend that the campus:

a. Pursue recovery of the $1,743 overcharge charged by the trade subcontractors and determine, as appropriate, if other change order work performed by these trade subcontractors had been cost-inflated in a similar manner. 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 accurate in accordance with §6.00, Changes in the Work, of the Contract General Conditions for Design-Bid-Build Projects.

Campus Response

a. The campus will, under the direction of Campus General Counsel, pursue recovery of the $1,743 overcharge charged by the trade subcontractors. The Campus will determine if other change order work performed by these trade subcontractors had been cost-inflated in a similar manner. Results of this recovery will be reported to the Chancellor’s office CPDC department.

b. The Campus will conduct staff and project management consultant training to ensure that hourly labor rates and the associated labor burden charged by trade subcontractors are appropriate and accurate in accordance with §6.00, Changes in the Work, of the Contract General Conditions for Design-Bid-Build Projects.

Anticipated completion date: September 3, 2012

PROJECT COMPLETION AND CLOSEOUT

Recommendation 4

We recommend that the campus reiterate to staff that the project closeout checklist and certification of completion should be prepared prior to filing the Notice of Completion.

Campus Response

The campus will reiterate to staff that the project closeout checklist and certification of completion should be prepared prior to filing the Notice of Completion. The campus will provide training to all staff and project management consultants how to track and prevent such occurrences.

Anticipated completion date: September 3, 2012
April 30, 2012

MEMORANDUM

TO: Mr. Larry Mandel
   University Auditor

FROM: Charles B. Reed
      Chancellor

SUBJECT: Draft Final Report 11-16 on the
          Social and Behavioral Sciences Building,
          California State University, San Marcos

In response to your memorandum of April 30, 2012, I accept the response as submitted with the draft final report on the Social and Behavioral Sciences Building, California State University, San Marcos.

CBR/amd