

CONSTRUCTION
CALIFORNIA STATE UNIVERSITY,
NORTHRIDGE
SCIENCE I REPLACEMENT

Audit Report 10-12
September 7, 2010

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ABBREVIATIONS

BOT	Board of Trustees
CM at Risk	Construction Manager at Risk
CPDC	Capital Planning, Design and Construction
CRB	Certification Review Board
CSU	California State University
CSUN	California State University, Northridge
EO	Executive Order
FPDC	Facilities Planning, Design and Construction
GMP	Guaranteed Maximum Price
OUA	Office of the University Auditor
Science I	Science I Replacement
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, Northridge campus and the offices of the construction manager and selected subcontractors from April 26, 2010, through June 3, 2010, and audited the Science I Replacement (Science I) 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 Science I 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]

The campus did not review the certified payroll records and hourly labor rate worksheets for each trade subcontractor.

PROJECT COMPLETION AND CLOSEOUT [7]

The campus did not complete a certificate of completion and a project closeout checklist as part of the final project closing procedures.

INTRODUCTION

BACKGROUND

In 2004, the California State University, Northridge (CSUN) campus received funding appropriations and began planning for a new science replacement building. In May 2005, the campus executed an agreement with the architectural firm of Cannon Design for services related and incidental to the design and construction of the Science I Replacement (Science I) project. Also in May 2005, the campus awarded a contract to the construction management firm of Hathaway Dinwiddie Construction Company for pre-construction services that included design and bid phase services. In January 2006, the Board of Trustees (BOT) approved schematic plans for the Science I project at a project cost of \$50,301,000 with state funding from the 2004 Higher Education Capital Outlay Bond Fund.

In June 2007, the campus executed an agreement with Hathaway Dinwiddie Construction Company at a construction cost of \$40,073,057 and issued the Notice to Proceed on July 16, 2007, with a contract completion date of May 14, 2009. The State Fire Marshal issued a Certificate of Occupancy on July 14, 2009, and the campus issued a change order on July 15, 2009, to notify the construction manager that it would be taking beneficial occupancy of the building effective close of business July 30, 2009. The campus filed a Notice of Completion on September 3, 2009.

The Science I project is 90,600 gross square foot building with 13 lecture rooms, including larger 120 and 150 station rooms with tiered seating. The building can accommodate up to 112 students in wet and dry laboratories and 1,794 students in lecture space. The building is a four-story, steel-braced frame structure with concrete filled metal decks. The exterior is finished with a durable panel system with integral color and glass curtain-wall entry points. The building utilizes the existing utility locations including water, firewater, sewer, storm water, and gas service. The building's sustainable features include energy efficient lighting and control systems and the use of extensive natural lighting. The project also included enhancements to adjacent landscaping, walkway connections, and improvements to on-campus vehicular circulation.

The CSUN campus managed the Science I project, and it chose the Construction Manager at Risk (CM at Risk) with Guaranteed Maximum Price (GMP) delivery method. In this method, a construction management firm chosen by a competitive bidding process provides all or significant portions of design and construction administrative services and takes part in establishing the GMP. The CM at Risk acts as the general contractor during construction, assumes the risk of subcontracting the work, and guarantees completion of the project. The liability for the success in completing the project on time and in budget lies with the construction manager, and not with the university. Further, there is a potential for cost savings should the project be completed below the GMP.

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 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 Science I 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 Science I 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

CONSTRUCTION MANAGEMENT AND ACCOUNTING

The campus did not review the certified payroll records and hourly labor rate worksheets for each trade subcontractor.

We found that the labor rates charged by two trade subcontractors included variations from the hourly rate worksheets when compared to the certified payroll records. The variations included differences in the rates charged for worker's compensation insurance, subcontractor's liability insurance, and the calculation of the burden amounts. In the aggregate, these variations did not result in material differences in the change orders we reviewed.

State University Administrative Manual (SUAM) §9824.01 states that the campus shall request a minimum of the first week's certified payroll records from the general contractor and a minimum of the first week's certified payroll records from each subcontractor of any tier. Additionally, the contractor shall submit to the construction administrator the hourly labor rate worksheet for its entire payroll, as well as for all of its subcontractors. Having the certified payroll records, along with hourly labor rate worksheets, will allow a check on wage rates submitted for change order work.

The associate vice president for facilities development and operations stated that the chancellor's office Capital Planning, Design and Construction (CPDC) department used a third-party vendor to review certified payroll records for the project, and the campus mistakenly believed that the review included verification of wage rates on change order work.

Failure to review the certified payroll records and hourly labor rate worksheets submitted for change order work may result in the campus being charged excess labor costs.

Recommendation 1

We recommend that the campus reiterate to staff that certified payroll records and hourly labor rate worksheets for each trade subcontractor should be reviewed and used to verify wage rates submitted for change order work.

Campus Response

We concur. The associate vice president for facilities development and operations issued a memorandum to all facilities planning, design and construction (FPDC) staff that reiterates the requirement to review certified payroll records to verify consistency.

PROJECT COMPLETION AND CLOSEOUT

The campus did not complete a certificate of completion and a project closeout checklist as part of the final project closing procedures.

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.

The associate vice president for facilities development and operations stated that the failure to complete a certificate of completion was due to oversight. He further stated that the campus prepared its own spreadsheets to track the closeout process rather than using the project closeout checklist form from CPDC.

Failure to complete the certification of completion and project closeout checklist as part of the final project closing procedures increases the risk of misunderstandings and miscommunication regarding rights and responsibilities.

Recommendation 2

We recommend that the campus reiterate to staff that the certificate of completion and project closeout checklist are to be prepared as part of the final project closing procedures.

Campus Response

We concur. The associate vice president for facilities development and operations issued a memorandum to all FPDC staff that reiterates the requirement to use the CPDC forms 702.02c (certificate of completion) and 702.02p (project closeout checklist).

APPENDIX A: PERSONNEL CONTACTED

Name

Title

Office of the Chancellor

Elvyra San Juan

Assistant Vice Chancellor,
Capital Planning, Design and Construction

California State University, Northridge

Jolene Koester

President

Colin Donahue

Associate Vice President for Facilities Development and Operations

Howard Lutwak

Director, Internal Audit

Tom McCarron

Vice President, Administration and Finance and
Chief Financial Officer

Ken Rosenthal

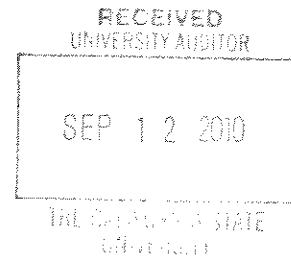
Manager of Construction Services

California State University
Northridge

Office of the Vice President
Administration and Finance

September 13, 2010

Mr. Larry Mandel, University Auditor
Office of the University Auditor
The California State University
401 Golden Shore, 4th Floor
Long Beach, CA 90802



Subject: Campus Response to Recommendations of Audit Report Number 10-12
Construction - Science I Replacement at California State University, Northridge

Dear Larry:

Enclosed please find the California State University, Northridge (CSUN) response to the recommendations of the audit, as requested in your e-mail of September 9, 2010. We have also sent this document via e-mail to adouglas@calstate.edu.

We have read the report including the observations and recommendations, and agree with them. Corrective action to implement all of the recommendations has been taken. By separate correspondence, the applicable documents evidencing completion of our implementation process and corrective action for each recommendation will be provided.

Should there be questions regarding the contents of the response, they may be addressed to Howard Lutwak, Director of Internal Audit, at (818) 677-7647.

We appreciate the recommendations to improve CSUN's systems of internal control.

Sincerely,

A handwritten signature in black ink, appearing to be "Tom McCarron".

Tom McCarron
Vice President Administration and Finance and CFO

Enclosures

cc: Dr. Jolene Koester, President
Howard Lutwak, Director of Internal Audit

CONSTRUCTION
CALIFORNIA STATE UNIVERSITY,
NORTHRIDGE
SCIENCE I REPLACEMENT
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CONSTRUCTION MANAGEMENT AND ACCOUNTING

Recommendation 1

We recommend that the campus reiterate to staff that certified payroll records and hourly labor rate worksheets for each trade subcontractor should be reviewed and used to verify wage rates submitted for change order work.

Campus Response

We concur. The associate vice president for facilities development and operations issued a memorandum to all Facilities Planning, Design and Construction (FPDC) staff that reiterates the requirement to review certified payroll records to verify consistency.

PROJECT COMPLETION AND CLOSEOUT

Recommendation 2

We recommend that the campus reiterate to staff that the certificate of completion and project closeout checklist are to be prepared as part of the final project closing procedures.

Campus Response

We concur. The associate vice president for facilities development and operations issued a memorandum to all Facilities Planning, Design and Construction (FPDC) staff that reiterates the requirement to use the CPDC forms 702.02c (certificate of completion) and 702.02p (project closeout checklist).

THE CALIFORNIA STATE UNIVERSITY
OFFICE OF THE CHANCELLOR



BAKERSFIELD

CHANNEL ISLANDS

September 20, 2010

CHICO

MEMORANDUM

DOMINGUEZ HILLS

EAST BAY

TO: Mr. Larry Mandel
University Auditor

FRESNO

FULLERTON

FROM: Charles B. Reed
Chancellor

HUMBOLDT

SUBJECT: Draft Final Report 10-12 on *Science I Replacement*,
California State University, Northridge

LONG BEACH

LOS ANGELES

MARITIME ACADEMY

In response to your memorandum of September 20, 2010, I accept the response as submitted with the draft final report on *Science I Replacement*, California State University, Northridge.

MONTEREY BAY

NORTHRIDGE

POMONA

CBR/amd

SACRAMENTO

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSÉ

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS