

**CALIFORNIA STATE UNIVERSITY,
BAKERSFIELD**

MATH AND COMPUTER SCIENCE BUILDING

Final Report

July 21, 2008

CONSTRUCTION PROJECT EVALUATION
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD
MATH AND COMPUTER SCIENCE BUILDING PROJECT

July 21, 2008

Prepared by:



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This report and all associated analysis contained herein are based upon information made available to KPMG LLP. KPMG LLP is not responsible for incomplete or inaccurate information provided during the preparation of this report. This report only presents and summarizes factual data and does not represent an opinion or attestation to the position, approach, or representation of information made by any other party involved with this evaluation.

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EXECUTIVE SUMMARY

Summary of Findings

Based upon our evaluation, the Math and Computer Science Building project at California State University, Bakersfield (“CSUB”) was not always administered consistent with our expectations of a project of this size, scope, and complexity. We found areas of control or process weaknesses that could expose CSUB to unnecessary risks, if not addressed. As a result of our observations, we have identified areas which could be improved. At the time of our review, the Project was not yet closed.

Our observations, associated risks, and recommendations are summarized below. Examples of specific action steps are further detailed in the body of this report.

	Observation	Risk	Recommendation
1.	Additional design services were not authorized with an Extra Service Authorization Letter as required by SUAM Section 9210.03.	By using methods other than an Extra Service Authorization Letter to authorize additional architect services, CSUB may not be appropriately protected against later disputes over scope and cost.	In the future, CSUB should follow SUAM and use the required method to issue changes and additions to Architect/Engineer Service Agreements. (Ownership: CSUB)
2.	Certain documentation could not be provided to the auditor.	Inconsistent filing and document control practices may result in misplaced documentation potentially exposing CSUB to unnecessary risk in the event of a protest or other dispute.	On future projects, a system should be used to facilitate appropriate document administration practices and control. (Ownership: CSUB)
3.	A detailed cost of the work was not included with the CM at Risk payment applications as required by Section 8.02 of the Contract General Conditions.	CSU is at risk of overpayment when a detailed cost report is not reviewed and compared to the Schedule of Values as required.	CPDC should review and clarify the current progress payment provisions in the Contract General Conditions. (Ownership: CPDC)
4.	There are opportunities for CSUB to realize cost savings on the Project through S.C. Anderson’s “buy-out” of trade contractors and unused contingency.	CSUB is at risk of not realizing all potential savings unless a reconciliation to S.C. Anderson’s actual costs is performed and “buy-out” savings and unused contingency are examined.	CSUB should require S.C. Anderson to perform a final reconciliation of its actual job costs to the contracted GMP and present a calculation of its “buy-out” and total savings on the Project for CSUB’s review approval. (Ownership: CSUB)

EXECUTIVE SUMMARY

	Observation	Risk	Recommendation
5.	Although the Vice President of Administration signed all change orders, not all other required approval signatures were consistently obtained on the change orders.	Without the appropriate signatures indicating review and approval of the change order CSUB runs the unnecessary risk of inadvertently authorizing inappropriate scope, time extensions, or cost.	In the future, CSUB should obtain all required signatures for change orders. (Ownership: CSUB)
6.	Change order mark-up is not consistently calculated in accordance with Section 6.01 of the Contract General Conditions.	As a result of incorrectly calculated mark-up, it appears CSUB has overpaid on its change orders.	CSUB should review the change order calculations and seek to recover disallowed amount identified by this audit and any other additional overpayments identified through CSUB review. In the future, CSUB should ensure that change order amounts are calculated in accordance with the Contract General Conditions. (Ownership: CSUB)
7.	A change order log inclusive of the change order classifications was not maintained as required per SUAM 9792.	CSUB may not realize the extent of the architect errors and omissions if a change order log is not appropriately maintained and is at risk of not recovering damages should they be warranted.	In the future, CSUB should maintain a change order log as required in SUAM 9792. (Ownership: CSUB)
8.	Contingency was not contemporaneously reduced when a change order funded by contingency was issued and as a result, the contract amount was improperly increased.	CSUB is increasing the GMP amount when no increase is warranted and appears to have a higher contractual obligation than they should.	In the future, CSUB should use zero dollar change orders to document the shifting of contingency funds to pay for additional cost of work. (Ownership: CSUB)
9.	Professional Services were performed outside of the contractual agreements.	When professional services are performed prior to or extending after a contractual agreement, CSUB runs an unnecessary business risk in the event of a dispute.	In the future, CSUB should take care to ensure professional services are performed when a contractual agreement is in place, and proactively extend contracts when necessary. (Ownership: CSUB)

INTRODUCTION

Purpose

KPMG LLP (“KPMG”) was retained by California State University’s (“CSU”) Office of the University Auditor on October 29, 2004 and subsequent amendment dated August 16, 2007 to perform an independent project evaluation of California State University, Bakersfield’s Math and Computer Science Building project (“the Project”).

The overall objective of the construction evaluation was to assess construction management practices for the Project and to substantiate that it was managed in accordance with law, Trustee policy, generally accepted business practices, and industry practices.

To the extent they were uncovered as part of our work, this report provides conclusions and recommendations addressing necessary process improvement and recovery of Project costs. Recommendations are listed and numbered sequentially throughout this report.

Scope

While the basic scope of our work matches that required by CSU’s Request for Proposal (“RFP”) and that which KPMG has performed in prior years, we also included additional items that we believe may provide benefit to CSU. This includes assessing methodologies utilized in verifying reasonableness of contractor change requests, help ensuring that a meaningful submittal review procedures were followed, and a review of Project accounting and cost reporting. KPMG identified specific areas within the scope listed below that present the potential for substantive loss or liability for CSUB’s Math and Computer Science Building project. The various scope categories are outlined in CSU’s request for proposal, dated July 14, 2004 and KPMG’s proposal, dated July 27, 2004 and contains the following sections:

- Project Background
- Design Cost
- Construction Bid Process
- Construction Change Orders
- Project Management or Inspection Services
- Major Equipment and Materials
- Close-Out Documentation
- Liquidated Damages
- Accounting

Methodology

KPMG's approach to this engagement incorporates a work plan shared with the University Auditor's Office as outlined in our agreement with CSU. During the course of our work, we expanded on tasks related to scope sections with the greatest potential risk exposure, in our opinion. The work performed by KPMG was conducted in accordance with our aforementioned methodology, but is not limited to, the following tasks:

- Examine financial records, reports, written CSU procedures, CSU contract documents and other material related to the Project and compare current practices and procedures with CSU requirements and leading practices in the industry;
- Conduct a preliminary review to determine Project emphasis;
- Interview key individuals involved in the Project;
- Identify significant deficiencies, if any;
- Recommend changes that may result in streamlining the design/construction process, assuring adequate Project controls and reducing costs; and
- Prepare a written report of our findings and recommendations.

Exclusions

The services, fees, and delivery schedule for this engagement are based upon the following assumptions, representations, or information supplied by CSU.

1. KPMG is not responsible for and will not make management decisions relating to this Project or any other aspect of CSU's business. CSU shall have responsibility for making all decisions with respect to the management and administration of its real estate and capital projects.
2. CSU management accepts responsibility for the substantive outcomes of this engagement and, therefore, has a responsibility to be in a position in fact and appearance to make an informed judgment on the results of this engagement.
3. Our work under this engagement did not include technical opinions related to engineering, operations, and maintenance.
4. KPMG's work under this engagement did not include a review, audit, or evaluation of financial statements, tax services, or other services of KPMG not listed in this Statement.
5. We have, and will continue to consider the effect of this engagement on the ongoing, planned, and future audits, as required by *Government Auditing Standards* and have determined that this engagement will not impair KPMG's independence.

PROJECT BACKGROUND

The California State University, Bakersfield (“CSUB”) Math and Computer Science Building Project (“the Project”) consists of a new two-story 53,671 gross square feet building including specialized laboratories, shops, classrooms, faculty, and administrative spaces. The building will provide CSUB with the integration of the Computer Sciences and Mathematics programs, according to the development program outlined in the Campus Master Plan. The new facility will provide for programmatic interaction and sharing of computer resources.

The building was constructed as a slab on grade with a structural steel brace frame, brick veneer finish, and aluminum framed windows.

From April 21 through April 25, 2008, KPMG conducted fieldwork at CSUB. During fieldwork, KPMG reviewed records from the following entities involved with the Project:

Architect	Studios Architecture
Construction Manager (“CM”) at Risk	S.C. Anderson, Inc.
Inspector of Record (“IOR”)	Leach and Leach Construction Inspection
Project Management and Administration	CSUB Office of Facilities Planning Development & Operations

Follow-up discussions to clarify issues and supplement supporting documentation were conducted through the completion of this report.

Delivery Methodology

This Project was delivered using a Construction Manager at Risk (“CM at Risk”) Guaranteed Maximum Price (“GMP”) contract, where the CM at Risk took part in the efforts of establishing the GMP prior to finalizing the final design and subsequently acted as the general contractor during construction, assuming the risk of subcontracting the work, and guaranteeing completion of the Project.

Timeline

Selection of the Architect and the CM at Risk for this Project occurred in late 2004. CSUB entered into a Pre-Construction Service Agreement with S.C. Anderson on November 23, 2004 for initial CM at Risk services. Studios Architecture (“Studios”) was selected as Architect for the Project and an Architect/Engineer Agreement was executed between CSUB and Studios on December 7, 2004. In June 2006, following completion of design, S.C. Anderson submitted a cost proposal for \$16,971,527, which exceeded the construction budget by \$332,348. CSUB and S.C. Anderson entered into a contract for the budgeted amount of \$16,639,179. The agreement allowed S.C. Anderson to be

compensated for the \$332,348 from any savings, should savings be realized at the conclusion of the Project. The Notice to Proceed was issued and established the beginning of construction as June 26, 2006 and the contracted completion date as December 28, 2007.

Through the change order process, a total of 10 days were added to the Project extending the contractually agreed upon completion date to January 7, 2008. CSUB did not receive occupancy until February 11, 2008 as evidenced by the Certificate of Occupancy. At the time of our audit fieldwork, on April 25, 2008, the Notice of Completion had not yet been issued. As such, the project was not closed out at the time of our audit.

Project Costs

The schematic plans for the Project were approved by the CSU Board of Trustees (“BOT”) in the amount of \$20,423,000 at the May 10-11, 2005 BOT meeting. In January 2007, the amount of funding for equipment was increased from \$1,448,000 to \$1,513,000, bringing the total Project budget allocation to \$20,488,000.

CSUB secured \$532,073 in additional funding from the CSUB Foundation, the Parking Fund, the Facilities Operating Budget, the Soccer Field Rental Fund, Minor Capital Outlay and Trust funds to supplement the allocation bringing the total budget for the Project to \$21,020,073.

At the time of fieldwork, there were \$20,750,182 in commitments on the Project and \$18,617,245 had been expended in actual costs. CSUB did not anticipate any additional costs that would result in a budget shortage.

The following table represents the Project costs:

Description	Budget (2-7)	Commitments	Actual	Variance (Budget - Commitments)
Construction	\$ 15,711,000	\$ 17,573,550	\$ 15,835,480	\$ (1,862,550)
Architect and Engineering	965,000	1,045,108	1,006,957	(80,108)
Contract Management	1,110,000	775,325	618,632	334,675
Contingency	841,000			841,000
Required Additional Services	348,000	258,132	256,145	89,868
Group II Equipment	1,513,000	1,098,068	900,031	414,932
Subtotal	\$ 20,488,000	\$ 20,750,182	\$ 18,617,245	\$ (262,182)
Additional Funds Acquired	532,073			532,073
Total	\$ 21,020,073	\$ 20,750,182	\$ 18,617,245	\$ 269,891

Recommendation:

None

DESIGN COSTS

A standard Project Architect/Engineer Agreement in the amount of \$914,000 was executed on December 7, 2004 between CSUB and Studios Architecture (“Studios”). Subsequent changes increased the contractual amount by \$112,458 to \$1,026,458. The following table represents the contractual obligations for architectural services:

Description	Date	Amount
Project A/E Agreement		
Schematic Design (20.5%)	12/7/2004	\$ 187,000
Preliminary (14.4%)	12/7/2004	132,000
Construction Documents (38.9%)	12/7/2004	356,000
Bidding (2%)	12/7/2004	18,000
Construction Phase (20.5%)	12/7/2004	187,000
As-Builts (3.7%)	12/7/2004	34,000
Total Project A/E Agreement		\$ 914,000
Additional Obligations		
#1 - Add to Jazzman		\$ 16,300
#2 - Sewer to Ming Avenue		75,500
#3 - Update to seismic requirements		8,000
#4 - Repair of incorrectly fabricated gusset plates		2,558
#5 - Turn Around Revisions		6,300
#6 - Sidewalk layout revisions		1,800
#7 - Alternate screwed connection at brace to roof deck		500
#8 - Alternate screwed gage metal soffit framing detail		850
#9 - Revisions to allow trees to remain		650
Total A/E Contractual Agreements		\$ 1,026,458

Extra Services Authorization

SUAM Section 9210.03 states that a written Extra Service Authorization letter (“ESA”) is the appropriate means to facilitate additional services on a service agreement including Architect/Engineer Agreements.

CSUB used methods other than an ESA to authorize changes to the Architect/ Engineer Agreement as shown in the following table:

Additional Obligation	Authorization Method
#1 – Add to Jazzman	Request for Change to Purchase Order – unclear if this document was transmitted to the Architect; not addressed; not in letter form; does not contain all requirements of SUAM 9210.03
#2 – Sewer to Ming Avenue	Purchase order and transmittal letter; does not contain all the requirements of SUAM 9210.03
#5 – Turn Around Revisions	Architect quote; no letter available
#6 – Sidewalk layout revisions	Architect quote; no letter available
#9 – Revisions to allow trees to remain	Architect quote; no letter available

Change 3 fulfilled the requirement of an ESA letter. Changes 4, 7, and 8 consisted of work directed and paid by S.C. Anderson and was assigned change numbers by CSUB for tracking purposes. The dollar amounts of changes 4, 7, and 8 were included in the table because they were costs ultimately incurred for design purposes; however since the obligation was between Studios and S.C. Anderson, formal ESA's were not issued by CSUB for those changes.

Observation:

Additional design services were not authorized with an Extra Service Authorization Letter as required by SUAM Section 9210.03.

Risk:

By using methods other than an Extra Service Authorization Letter to authorize additional architect services, CSUB may not be appropriately protected against later disputes over scope and cost.

Recommendation:

1. In the future, CSUB should follow SUAM and use the required method to issue changes and additions to Architect/Engineer Service Agreements.

(Ownership: CSUB)

Campus Response:

1. In the future, CSUB will follow SUAM and use the required method to issue changes and additions to Architect/Engineer Service Agreements. The campus concurs and will implement the changes recommended no later than November 2008.

Reimbursable Expenses

Section 4.3 of Rider A to the Project Architect/Engineer Agreement discusses compensation for reimbursable expenses. The reimbursement policy in this Agreement is complex and allows certain expenses to be reimbursable during one phase of the Project, but disallows them in other phases. In particular, requirements for reimbursement of reprographic services, which are discussed in Sections 4.3.2; 4.3.4; 4.3.5; and 4.3.6 of Rider A, vary greatly. The essence of these sections is that the cost of reprographics for bidding and during construction is reimbursable, but is generally considered a cost of the work during other phases of the Project. Additionally, there are restrictions on compensation for postage, messenger, consultant, and travel expenses.

The language related to reimbursable expenses in the standard CSU Project Architect/Engineer Agreement has been revised by CPDC for future agreements. As such, no additional recommendation is warranted.

Recommendation:

None

Invoice Payments

KPMG reviewed the amounts invoiced for the base contract and the various amounts authorized for extra services. Change 2 in the amount of \$75,500 included four phases of work related to sewer design and engineering. Based on discussions with CSUB Facilities Planning Development and Operations, not all the phases were completed. The work was billed on a percent complete basis with the entire \$75,500 invoiced by the end of 2005. Accounting information shows all \$75,500 was paid with the last payment occurring on February 13, 2006. After a CSUB personnel change in November 2007, the incoming Project Administrator discovered the overpayment and brought it to Studios' attention. Studios' provided a credit for \$35,545, the amount of the overpayment.

Recommendation:

None

CONSTRUCTION BID PROCESS

CSUB issued a Request for Proposal (“RFP”) in July 2004 to find a suitable Construction Manager at Risk (“CM at Risk”) for the Project. CSUB held a pre-proposal conference and site visit on August 18, 2004. The meeting was attended by eight contracting companies including representation from S.C. Anderson.

Technical and cost proposals were submitted by Bayley Construction, Colombo Construction, D.E. Barnhart, Edge Development, S.C. Anderson and Sundt Construction on or before September 8, 2004. First, the technical proposals were evaluated by the CSUB selection panel and points were awarded for technical competency. Second, the cost proposals were opened and a bid fee for preconstruction services was determined. In order to establish the successful bidder, a bid fee per quality point calculation was performed. The successful bidder determination was made on September 27, 2004 where S.C. Anderson was the apparent lowest responsive and responsible bidder with 89 total quality points and a bid fee for preconstruction services of \$1,515,750. This calculated to \$17,031 total bid fee per quality point, which was \$4,300 bid fee per quality point less than the next closest bidder.

Since this Project was delivered using a CM at Risk approach, S.C. Anderson was retained to perform preconstruction services and participate in the design efforts with Studios before the execution of a construction agreement. CSUB executed a standard Service Agreement with S.C. Anderson for the preconstruction services on November 23, 2004.

As the design phase was ending and preparations were underway to begin the construction phase of the Project, S.C. Anderson submitted a guaranteed maximum price for the construction of the Project in the amount of \$16,971,527. This amount exceeded the construction budget of \$16,639,179 by \$332,348. As a result, CSUB and S.C. Anderson entered into a contract for the budgeted amount of \$16,639,179. The agreement allowed S.C. Anderson to be compensated for the \$332,348 overage from any savings, should savings be realized at the conclusion of the Project. If there are no savings, no additional money would be due to the contractor. This arrangement is not uncommon in industry. At the time of our fieldwork, construction was not complete and the final amount of savings, if any, had yet to be determined.

Construction commenced on June 26, 2006 with the issuance of the Notice to Proceed.

Document Control

Some of the standard documents generally submitted during the bid process such as the Non-Collusion Affidavit, Small Business Preference, Certificate of Appropriate License California Company, Bid Proposal Form Signature Page and the DVBE documentation were not provided on this Project. In addition to bid documentation, complete information for all design changes was not readily available and at times fully executed change orders

obtained could not be located at procurement and copies had to be obtained from other sources.

The CSU Construction Management Procedures Manual, January 2005 requires that “the Construction Administrator should maintain the files indicated in the Filing System Guide for proper administration, reference, and control.”

In part, the limitations in Project documentation management practices can be attributed to the high turnover rate of key Project individuals during the Project including the Contracts Administrator, Project Administrator and the Project Manager. Based on conversations with personnel and observation of the procurement office, each of the Contracts Administrators maintained files based upon their own filing system making it difficult to locate documents in a timely manner if at all. While a central filing system is not practical or required, project documents should be maintained for proper administration, timely reference and control.

Observation:

Certain documentation could not be provided to the auditor.

Risk:

Inconsistent filing and document control practices may result in misplaced documentation potentially exposing CSUB to unnecessary risk in the event of a protest or other dispute.

Recommendation:

2. On future projects, a system should be in place to facilitate appropriate document administration practices and control.

(Ownership: CSUB)

Campus Response:

2. CSUB will implement a system to facilitate appropriate document administration practices and control on future projects. The campus concurs and will implement the changes recommended no later than November 2008.

CM at Risk Application for Payment

According to Section 8.02 of the Contract General Conditions the amount invoiced on the CM at Risk application for payment should not exceed the lesser of (a) the actual cost of the work (b) the percent complete of the Schedule of Values. Section 8.02 also requires a Schedule of Values and a detailed cost report to be submitted with each application for payment.

All CM at Risk applications for payments appropriately contained a Schedule of Values, but no detailed cost reports. As such, CSUB could not make the determination whether S.C. Anderson was billing the lesser of the actual cost of the work or the percentage complete of the Schedule of Values.

Observation:

A detailed cost of the work was not included with the CM at Risk payment applications as required by Section 8.02 of the Contract General Conditions.

Risk:

CSU is at risk of overpayment when a detailed cost report is not reviewed and compared to the Schedule of Values as required.

Recommendation:

3. CPDC should review and clarify the current progress payment provisions in the Contract General Conditions.

(Ownership: CPDC)

Management Response:

3. We agree. In June 2008, CPDC formed a committee of campus representatives and CPDC staff whose charge is to review and revise the CM at Risk Model and Guidelines (this includes the Contract General Conditions). The committee met in July, proposed and agreed to updates, and its members are now working towards finalizing these updates for presentation and final vetting with the Executive Deans in October, and, if approved, implementation in January 2009.

Potential Cost Savings

One of the benefits of a GMP compensation structure is the potential for a cost savings for CSUB if the Project is completed below the GMP. The GMP on this Project consisted of four main budget categories: (1) cost of the work, (2) general conditions, (3) contingency, and (4) the CM at Risk's overhead and profit.

The opportunity for cost savings only applies to the base contract work. There is no opportunity for cost savings on the change orders, since they are compensated as agreed upon lump sum amounts. Additionally, since S.C. Anderson's contract allows S.C. Anderson to be compensated up to \$332,348 of any savings on the contract, CSUB would only realize the savings if the GMP exceeded the cost of the work plus general conditions and S.C. Anderson's overhead and profit by more than this amount. At the time of our fieldwork, S.C. Anderson had \$213,461 left of its contingency. Additionally, S.C. Anderson accumulated savings from "buy-outs" of trade contract work. At the time of KPMG's review, these savings amounted to \$178,148. In KPMG's opinion, any contingency plus savings from buy-outs in excess of \$332,348 should revert back to CSUB. At the time of KPMG's fieldwork the Project was not yet complete, so even though this amount was calculated to \$59,261, the amount may differ at the end of the Project.

Since CSUB currently is not receiving S.C. Anderson's actual costs with its application for payments, it becomes important to perform a final reconciliation to S.C. Anderson's actual costs in order to take advantage of all potential savings. S.C. Anderson is currently not reporting the "buy-out" savings to CSUB.

Observation:

There are opportunities for CSUB to realize cost savings on the Project through S.C. Anderson's "buy-out" of trade contractors and unused contingency.

Risk:

CSUB is at risk of not realizing all potential savings unless a reconciliation to S.C. Anderson's actual costs is performed and "buy-out" savings and unused contingency are examined.

Recommendation:

4. CSUB should require S.C. Anderson to perform a final reconciliation of its actual job costs to the contracted GMP and present a calculation of its "buy-out" and total savings on the Project for CSUB's review approval.

(Ownership: CSUB)

Campus Response:

4. CSUB has required S.C. Anderson to perform a final reconciliation of its actual job costs to the contracted GMP along with a calculation of its "buy-out" and total savings. We have reviewed and approved their reconciliation and will reduce their final payment by the approved amount. The campus concurs and will implement the changes recommended no later than November 2008.

CONSTRUCTION CHANGE ORDERS

At the time of fieldwork, 17 change orders in the amount of \$740,033 had been executed on the Project between CSUB and S.C. Anderson. The following table summarizes the executed change orders:

C/O	Description	Date	Amount
1	Remove footnotes 1 & 2 from page one of Agreement PWC0750	9/22/2006	\$ -
2	Add storm drain line and inlets, revise sidewalk to include handicap ramp	10/31/2006	15,884
3	Remove fixed seating from the scope of Agreement PWC0750	11/9/2006	(83,675)
4	Add sewer manhole in Student Way to connect existing and new sewer line	11/27/2006	13,190
5	Additive alternates 5 and 7, and additional chilled water piping	11/28/2006	231,024
6	Addition of a retaining wall and work associated with various bulletins	12/27/2006	41,820
7	Rough work in the Café area and additional steel screen wall	2/8/2007	15,943
8	Additive chilled water re-route, finish change resulting in deduction	3/1/2007	(418)
9	Watertight at retaining wall, change conditions for added sidewalk	5/2/2007	9,879
10	Clearance height at stairs, steel support for HVAC opening, Plate stiffeners	7/10/2007	87,494
11	Additional site sewer work, first floor display case, additional outlets	8/15/2007	69,760
12	Turnaround work, turnaround light pole work, sidewalk & landscaping	10/3/2007	171,258
13	South wall design, extend drywall to deck, additional stud support	10/3/2007	5,388
14	Display case/Tack boards, infill gap at jogged partitions	12/18/2007	26,865
15	Scope of work discrepancies, stair landings, west stair/east wall	12/18/2007	93,784
16	Additional brick veneer support angle, paint above exterior wood ceiling	2/12/2008	6,826
17	Second floor soffit, telecom changes, elevator machine room ceilings	3/26/2008	35,011
Total			\$ 740,033

Signature Authority

Several signatures are required for the proper execution of a change order. Section 1.05 of Appendix D to the Campus Management Plan for Delegation of Authority, Revised 2001 (“Delegation Authority”) states the following:

- The Architect completes the change order form including architect signature.
- The contractor reviews the change order and indicates review and acceptance by signature.
- The University Representative (a specific position) then reviews the backup and initials or signs the change order indicating review and compliance with policies and procedures.
- Finally, the approval signature is obtained from the appropriate CSUB individuals based on the dollar amount of the change order. That is the University Representative may sign all change orders up to \$20,000, the Director of Facilities Management may sign all change orders over \$20,000 but less than \$100,000 and the Vice President of Administration shall sign all change orders over \$100,000.

Discussions with CSUB indicated the change orders were being prepared by the Procurement Office and not the Architect early in the Project. This was evidenced by the lack of Architect signature on change orders 3 through 9. This issue was corrected shortly after a new Project Manager joined the Project in May 2007.

There was no evidence that the University Representative signed and initialed any of the change orders indicating review of the backup and compliance with policies and procedures, as required by the Delegation Authority. Additionally, the change orders did not contain any signatures by the Director of Facilities Management. It appears only the Vice President of Administration signed the change orders. The CSU Project Management Reference Manual recommends all levels of approvals, not only the highest required level of authority. It is important to include signature and approval from the individuals closest to the Project, which would include the University Representative and Director of Facilities. It is the intent of CPDC to have all required levels sign the change order.

Although there is no mention of a required Accounting Officer signature in the Delegation of Authority, the Accounting Officer did not sign change orders 2 and 10 through 15. There is a line for the Accounting Officer to sign on the face of the change order.

Observation:

Although the Vice President of Administration signed all change orders, not all other required approval signatures were consistently obtained on the change orders.

Risk:

Without the appropriate signatures indicating review and approval of the change order CSUB runs the unnecessary risk of inadvertently authorizing inappropriate scope, time extensions, or cost.

Recommendation:

5. In the future, CSUB should obtain all required signatures for change orders.

(Ownership: CSUB)

Campus Response:

5. CSUB's practice did require all appropriate signatures; they were, however, not all on the change order document. The signatures, except for that of the Vice President of Business and Administrative Services appeared on the "change order request" form that authorized the architect to develop the formal change order. This "change order request" was reviewed by the Vice President of Business and Administrative Services before the change order document was prepared and signed by him. Going forward, we will obtain all required signatures on the change order document. The

campus concurs and will implement the changes recommended no later than November 2008.

Mark-up

Section 6.01(b) of the Contract General Conditions outlines how change order costs should be calculated including allowable percentages for mark-up and provisions that mark-up may not be charged on mark-up itself. Additionally, mark-up is supposed to be calculated on direct cost of work only, including the direct costs for subcontractors and sub tier subcontractors. KPMG performed recalculations of the change order amounts based on the supporting documentation for a sample of change order line items. Evidence of incorrectly calculated mark-up were discovered as follows:

- (1) On occasion, all sub tier costs including mark-up was treated as a direct cost to the subcontractor. This caused subcontractor and CM at risk mark-ups to be calculated on the sub tiers’ mark-up, which is not permitted. Similarly, the total costs of subcontractor change order work, including mark-up, was at times treated as direct costs resulting in CM mark-up being calculated on the subcontractor’s mark-up. The latter generally occurred when a subcontractor would submit a quote without mark-up separately identified and the full amount was treated as a direct cost.
- (2) Compounding the error in (1): A subcontractor is generally permitted to take 7% mark-up on the direct costs of a sub tier’s direct costs, compared to 15% on the subcontractor’s own direct costs. When the sub tier cost is treated as a direct cost of the subcontractor, the subcontractor charges the higher mark-up percentage increasing the cost to CSUB. (This has no impact on the CM at Risk mark-up, since the CM at Risk mark-up is 7% for both sub tiers and subcontractor work.)

KPMG tested \$281,788 of the total change order amount of \$740,033 on the Project. The following table summarizes total amount of disallowed mark-up from the sample tested:

Change Order	Amount Tested	Amount Recalculated	Disallowed Amount
10	\$ 50,664	\$ 48,311	\$ 2,353
12	54,616	51,692	2,924
12	94,319	86,167	8,152
15	82,189	80,759	1,430
Total	\$ 281,788	\$ 266,929	\$ 14,859

Observation:

Change order mark-up is not consistently calculated in accordance with Section 6.01 of the Contract General Conditions.

Risk:

As a result of incorrectly calculated mark-up, it appears CSUB has overpaid on its change orders.

Recommendation:

6. CSUB should review the change order calculations and seek to recover disallowed amount identified by this audit and any other additional overpayments identified through CSUB review. In the future, CSUB should ensure that change order amounts are calculated in accordance with the Contract General Conditions.

(Ownership: CSUB)

Campus Response:

6. The disallowed amounts were for profit and overhead charges on the markup of second tier subcontractor work. CSUB failed to identify these errors in billing; however, we are in the process of doing so and will make the necessary changes on this project and ensure that change order amounts on future projects are calculated in complete accordance with Contract General Conditions. The campus concurs and will implement the changes recommended no later than November 2008.

Change Order Report Analysis

CSU has historically considered change order costs incurred due to errors and omissions by the architect of up to 3% of the initial award construction cost as falling within the architect's 'standard of care'. However, the agreement as executed does not contain any language defining 'standard of care', but states the architect shall secure and maintain appropriate errors and omissions insurance of no less than \$1,000,000 per claim, \$2,000,000 per annual aggregate. This language has been changed in a later version of the CSU standard agreement to define 'standard of care'.

SUAM 9792 requires that a change order log including the classifications of the change orders is maintained. CSUB did not track change orders by classification, but after discussions with CSUB and showing an example form, CSUB created a change order log to include the information required.

The errors for the Project were included in the provided table under the classification 4.0 and omissions were classified as 4.1. The table below provides a summary of the information provided:

Class	Type of Change	Amount	Percent of Total CO	Percent of Original Contract
4.0	Error in the contract documents	\$ 230,583	31.2%	1.4%
4.1	Omission from the contract documents	101,599	13.7%	0.6%
4.2	Unforeseeable job site condition	67,499	9.1%	0.4%
4.3	Change in the requirements of a regulatory agency	11,396	1.5%	0.1%
4.4	Change originated by the University Changes in specified work due to the unavailability of	325,590	44.0%	2.0%
4.5	specified materials	4,717	0.6%	0.0%
4.6	Other	(1,350)	-0.2%	0.0%
Total Change Orders		\$ 740,033	100.0%	4.4%
Original Contract Amount		\$ 16,639,179		
Total		\$ 17,379,212		

Based on the information provided, change orders attributable to errors are calculated to 1.4% of the original contract amount, and change orders attributable to omissions are calculated to be 0.6% of the original contract amount. These values amount to less than the 3% threshold both individually and in aggregate. As such, no action to recover damages for errors and omissions is warranted.

Observation:

A change order log inclusive of the change order classifications was not maintained as required per SUAM 9792.

Risk:

CSUB may not realize the extent of the architect errors and omissions if a change order log is not appropriately maintained and is at risk of not recovering damages should they be warranted.

Recommendation:

7. In the future, CSUB should maintain a change order log as required in SUAM 9792.

(Ownership: CSUB)

Campus Response:

7. CSUB did maintain a change order log; however, the classifications and reasons for change orders were identified on the individual change requests and not shown on the log. We have modified the change order log to include this information and it will be used on this project and future projects. The campus concurs and will implement the changes recommended no later than November 2008.

Contingency Usage

The contractual agreement included a CM contingency in the amount of \$340,192. When items were identified by CSUB and S.C. Anderson to be funded by this contingency a change order was issued. However, the change order included the additive amount only and did not reduce the contingency by a corresponding amount. As a result, the contract was improperly increased. A deductive change order needs to be issued at the end of the Project reducing the contingency by an amount equal to the aggregate changes identified as change order items funded by the CM contingency. At the time of our fieldwork this amount was \$126,731 as detailed below:

Description	Subcontractor	Total
Door Size conflict between schedule/plans	Complete Door Systems	\$ 3,212
Re-align elevator guide rails due to incorrect anchor bolt lay out	Kern Steel	9,021
Display cases/tack boards in hallways	John Pence, Frye	27,558
Scope discrepancy for welding perimeter bracing at deck (bid package #4 and #13)	Kern Steel	40,591
Screw vs. weld roof diagonal bracing to avoid melting of roofing rigid insulation. Roof placed prior to steel completed. Re-fabricate braces.	Kern Steel	41,599
Extend stair landing	Frye Construction	2,268
West stair, east wall	Frye Construction	1,783
Change elevator rough opening from 3’-6” to 4’-6”	Frye Construction	698
Total CM Contingency Change Orders		\$ 126,731

A better approach would have been to shift the amount from contingency as a zero dollar change order at the time the work to be covered by contingency was identified.

Observation:

Contingency was not contemporaneously reduced when a change order funded by contingency was issued and as a result, the contract amount was improperly increased.

Risk:

CSUB is increasing the GMP amount when no increase is warranted and appears to have a higher contractual obligation than they should.

Recommendation:

8. In the future, CSUB should use zero dollar change orders to document the shifting of contingency funds to pay for additional cost of work.

(Ownership: CSUB)

Campus Response:

8. This issue was identified by CSUB approximately three-quarters of the way through the project, and from that point forward, zero dollar change orders were utilized to document the shifting of contingency funds to pay for additional cost of work. We will continue this practice going forward. The campus concurs and will implement the changes recommended no later than November 2008.

INSPECTION SERVICES

A standard CSU Service Agreement between Leach and Leach Construction Inspection (“Leach and Leach”) and CSUB was executed on August 21, 2006 to retain Leach and Leach as the Inspector of Record on the Project. The contract value was \$150,312 and no changes or extra services had been authorized at the time of our fieldwork.

The first dated signature on the Agreement is July 25, 2006, and counsel signed a month later on August 21, 2006 which is the formal execution date of the contract. The first billing for Leach and Leach covered services performed in August of 2006 and contains \$5,083 of services performed prior to the full execution of the agreement.

In addition, inspection services were rendered after the contract value had been exhausted, and prior to an ESA being executed for additional services. The amount of services invoiced prior to a contractual extension was \$8,700.

Observation:

Professional Services were performed outside of the contractual agreements.

Risk:

When professional services are performed prior to or extending after a contractual agreement, CSUB runs an unnecessary business risk in the event of a dispute.

Recommendation:

9. In the future, CSUB should take care to ensure professional services are performed when a contractual agreement is in place, and proactively extend contracts when necessary.

(Ownership: CSUB)

Campus Response:

9. In the future, CSUB will take care to ensure that professional services are performed when a contractual agreement is in place, and proactively extend contracts when necessary. The campus concurs and will implement the changes recommended no later than November 2008.

MAJOR EQUIPMENT/MATERIALS REVIEW

KPMG selected and reviewed a sample of materials and equipment based on construction cost and accessibility to the installed items. As this Project was partially a functional facility at the time of KPMG's fieldwork, consideration was given to equipment and materials located in unoccupied areas in order not to interrupt student, staff, or faculty activities.

CSUB allowed access to drawings, specifications, and submittals. The equipment and materials located in the field were compared to submittals approved by the architect and/or engineer and were verified against performance specifications, submittals, and drawings.

The following materials and equipment items were approved by the architect and/or engineer and visually confirmed as installed on the Project:

Division	Drawing No.	Brand	Model No./ Capacity	Description
16460	E0.2	GE	9T31G0005G03 112.5 KVA 277/480, 3PH, 4W, 60 Hz	TX-2A Transformer
16442	E0.4	GE	AQF3422SBX AXQ3S5T6B7 225 Amp, 208Y/120V 3P4W	L1A Electrical Panel
15720	M0.1	McQuay	RAH047C 23,500 CFM	AH-3 Air Handling Unit
15400	M0.01	Lochinvar	PBN01501-M7	B-2 Boiler
14212	A7.13	Republic	3500 Lbs. 125 FPM	Hydraulic Elevator
6411	A9.01	Stolo Cabinets	Custom	Casework
9512	A6.02	Armstrong	Ultima Square Lay-in	Acoustic Ceiling Tiles
9512	A6.01	Rulon	Red cedar, RC Satin Clear, System PG-8-10-32	Wood Ceiling
10210	A8.40	B&C Awnings	Powder coated - RAL 7038	Exterior Louver/Canopy Aluminum Sun Shade

The equipment and materials observed in the field conformed to the specified requirements, specifications, and submittals based on a visual inspection of equipment labeling, and comparison to manufacturer specifications provided and approved by the architect.

Recommendation:

None

CLOSE-OUT PROCESS

CSUB obtained occupancy of the Project on February 11, 2008, and the building was holding classes on the first floor at the time of fieldwork. However, the Project was not complete at that time, and as such, the Notice of Completion had not yet been issued.

The California State University Project Close-out Checklist was used to track close-out items. KPMG reviewed the checklist as well as the operation and maintenance manuals, warranties, training reports, operating permits, final inspection reports, red line drawings and other relevant Project close-out documentation for compliance established by the Contract General Conditions and SUAM. Nothing came to KPMG's attention indicating discrepancies with the close-out process.

Recommendation:

None

LIQUIDATED DAMAGES

The start of construction for the Project was memorialized on the Notice to Proceed as June 26, 2006. The Project was to be completed 550 consecutive calendar days later on December 28, 2007, or liquidated damages could be assessed at \$3,500 per consecutive calendar day beyond the contracted completion date. Ten days were contractually added to the Project through the change order process, and January 7, 2008 became the new contracted completion date for the Project.

The campus took occupancy 35 days after the contracted completion date when the Certificate of Occupancy was granted on February 11, 2008. At the time of fieldwork on April 25, 2008, the Notice of Completion had not been issued and no additional time extensions had been executed.

CSUB explained the delay in completing the Project began in the winter of 2007 when problems with the glazing occurred. Without glazing in place, the building could not be properly conditioned and interior items could not be completed in an unconditioned space. The delay in issuing the Notice of Completion was a result of the contractually specified landscaping maintenance period and commissioning of the HVAC system.

CSUB was reviewing the issue of liquidated damages and was in the process of determining whether they should be assessed or waived as this report was being drafted. The date of occupancy and the actual completion date are past the contracted completion date, but CSUB did not anticipate using the building until spring 2008. S.C. Anderson allowed them to move in some furniture prior to official occupancy and CSUB was able to use the building as planned for the spring term.

Since the Project was not complete as of the end of fieldwork, liquidated damages cannot be accurately calculated at this time.

Recommendation:

None

ACCOUNTING

Accounting for the Project is tracked using the PeopleSoft system, but due to the different funding sources, CSUB had to compile the total Project accounting, including budget amounts, encumbrances, and expenditures, at KPMG's request. The Excel workbook provided was not directly generated by the accounting system, but consisted of a 'shadow' system based on budget amounts, encumbrances and expenditures.

CSUB reported the shadow system is reconciled to the accounting system roughly every two weeks. When KPMG requested the Project accounting information, CSUB explained there were several transfers that needed to occur as well as a reconciliation before the information could be provided. It took two weeks for CSUB to produce the accounting information.

KPMG reviewed the accounting information provided and reconciled the shadow system Excel spreadsheets to the main accounting system and source documentation on a sample basis.

Recommendation:

None

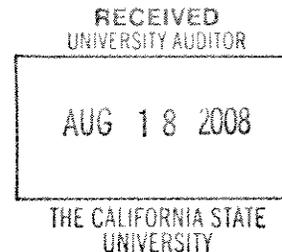


**Office of the Vice President of Business and Administrative Services
California State University, Bakersfield**

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(661) 654-2287
FAX (661) 654-6923
Email: mneal@csub.edu

August 18, 2008



Mr. Larry Mandel
University Auditor
California Ste University
401 Golden Shore, 4th Floor
Long Beach, CA 90802-4210

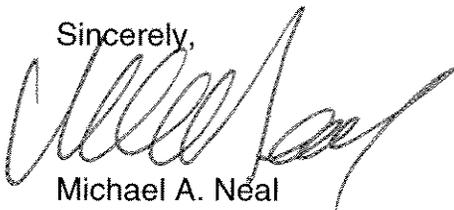
Re: Campus Response to Recommendations of KPMG Audit of Math and Computer Science Building at California State University, Bakersfield

Dear Mr. Mandel: 

The attached documents are being submitted to satisfy the "Audit Response and Follow – Up Procedures". Included you will find the audit recommendations with our campus response, corrective action plan and date of expected implementation. An electronic copy of these documents is also being provided to Anne Douglas.

Please have your staff review our responses and corrective action plan and return any comments or suggestions to myself and Douglas Wade. Our plan is to have corrective actions implemented and evidence provided to your office by the end of November 2008.

Sincerely,



Michael A. Neal
Vice President for Business
and Administrative Services

Cc's: without attachments
Horace Mitchell, President
Douglas Wade, AVP, Fiscal Services

"ATTITUDE MAKES THE DIFFERENCE"

CALIFORNIA STATE UNIVERSITY, BAKERSFIELD

MATH AND COMPUTER SCIENCE BUILDING

DESIGN COSTS

Recommendation:

1. In the future, CSUB should follow SUAM and use the required method to issue changes and additions to Architect/Engineer Service Agreements.

(Ownership: CSUB)

Campus Response:

1. Thank you for the observation and recommendation. In the future, CSU Bakersfield will follow SUAM and use the required method to issue changes and additions to Architect/Engineer Service Agreements. The campus concurs and will implement the changes recommended no later than November 2008.

CONSTRUCTION BID PROCESS

Recommendation:

2. On future projects, a system should be in place to facilitate appropriate document administration practices and control.

(Ownership: CSUB)

Campus Response:

2. Thank you for the observation and recommendation. CSU Bakersfield will implement a system to facilitate appropriate document administration practices and control on future projects. The campus concurs and will implement the changes recommended no later than November 2008.

Recommendation:

4. CSUB should require S.C. Anderson to perform a final reconciliation of its actual job costs to the contracted GMP and present a calculation of its “buy-out” and total savings on the Project for CSUB’s review approval.

(Ownership: CSUB)

Campus Response:

4. CSU Bakersfield has required S.C. Anderson to perform a final reconciliation of its actual job costs to the contracted GMP along with a calculation of its “buy-out” and total savings. We have reviewed and approved their reconciliation and will reduce their final payment by the approved amount. The campus concurs and will implement the changes recommended no later than November 2008.

CONSTRUCTION CHANGE ORDERS

Recommendation:

5. In the future, CSUB should obtain all required signatures for change orders.

(Ownership: CSUB)

Campus Response:

5. CSU Bakersfield’s practice did require all appropriate signatures; they were however not all on the change order document. The signatures, except for that of the Vice-President of Business and Administrative Services appeared on the “change order request” form that authorized the architect to develop the formal change order. This “change order request” was reviewed by the Vice-President of Business and Administrative Services before the change order document was prepared and signed by him. Going forward we will obtain all required signatures on the change order document. The campus concurs and will implement the changes recommended no later than November 2008.

Recommendation:

6. CSUB should review the change order calculations and seek to recover disallowed amount identified by this audit and any other additional overpayments identified through CSUB review. In the future, CSUB should ensure that change order amounts are calculated in accordance with the Contract General Conditions.

(Ownership: CSUB)

Campus Response:

6. The disallowed amounts were for profit and overhead charges on the markup of second tier subcontractor work. CSUB failed to identify these errors in billing, however we are in the process of doing so and will make the necessary changes on this project and ensure that change order amounts on future projects are calculated in complete accordance with contract general conditions. The campus concurs and will implement the changes recommended no later than November 2008.

Recommendation:

7. In the future, CSUB should maintain a change order log as required in SUAM 9792.

(Ownership: CSUB)

Campus Response:

7. CSUB did maintain a change order log; however the classifications and reasons for change orders were identified on the individual change requests and not shown on the log. We have modified the change order log to include this information and it will be used on this project and future projects. The campus concurs and will implement the changes recommended no later than November 2008.

Recommendation:

8. In the future, CSUB should use zero dollar change orders to document the shifting of contingency funds to pay for additional cost of work.

(Ownership: CSUB)

Campus Response:

8. This issue was identified by CSU Bakersfield approximately 3/4 of the way through the project and from that point forward zero dollar change orders were utilized to document the shifting of contingency funds to pay for additional cost of work. We will continue this practice going forward. The campus concurs and will implement the changes recommended no later than November 2008.

INSPECTION SERVICES

Recommendation:

9. In the future, CSUB should take care to ensure professional services are performed when a contractual agreement is in place, and proactively extend contracts when necessary.

(Ownership: CSUB)

Campus Response:

9. Thank you for the observation and recommendation. In the future, CSU Bakersfield will take care to ensure that professional services are performed when a contractual agreement is in place, and proactively extend contracts when necessary. The campus concurs and will implement the changes recommended no later than November 2008.



Business and Finance
401 Golden Shore, 5th Floor
Long Beach, CA 90802-4210

www.calstate.edu

Richard P. West
Executive Vice Chancellor/CFO

562-951-4600
Fax 562-951-4970
rwest@calstate.edu

MEMORANDUM

Date: August 6, 2008

To: Larry Mandel
University Auditor

From: Richard P. West 
Executive Vice Chancellor & Chief Financial Officer

Subject: Audit Report
Math and Computer Science
California State University, Bakersfield

RECEIVED
UNIVERSITY AUDITOR

AUG 12 2008

THE CALIFORNIA STATE
UNIVERSITY

I am pleased that the overall theme of this audit report continues in a positive vein and that it finds general compliance with established procedures. I have reviewed the report with my Capital Planning, Design and Construction (CPDC) staff, and have attached our response to the auditors' findings and recommendation to CPDC.

RPW:ESJ:bn

Attachment

cc: Ms. Elvyra F. San Juan
Mr. Larry Piper
Mr. Thomas M. Kennedy
Mr. James Sowerbrower

CSU Campuses
Bakersfield
Channel Islands
Chico
Dominguez Hills
East Bay

Fresno
Fullerton
Humboldt
Long Beach
Los Angeles
Maritime Academy

Monterey Bay
Northridge
Pomona
Sacramento
San Bernardino
San Diego

San Francisco
San José
San Luis Obispo
San Marcos
Sonoma
Stanislaus

CONSTRUCTION PROJECT EVALUATION
CALIFORNIA STATE UNIVERSITY, BAKERSFIELD
MATH AND COMPUTER SCIENCE BUILDING

CONSTRUCTION BID PROCESS

Recommendation:

3. CPDC should review and clarify the current progress payment provisions in the Contract General Conditions.

(Ownership: CPDC)

Management Response:

3. We agree. In June 2008, CPDC formed a committee of campus representatives and CPDC staff whose charge is to review and revise the CM at Risk Model and Guidelines (this includes the Contract General Conditions). The committee met in July, proposed and agreed to updates, and its members are now working towards finalizing these updates for presentation and final vetting with the Executive Deans in October, and, if approved, implementation in January 2009.

THE CALIFORNIA STATE UNIVERSITY
OFFICE OF THE CHANCELLOR



BAKERSFIELD

August 20, 2008

CHANNEL ISLANDS

CHICO

MEMORANDUM

DOMINGUEZ HILLS

EAST BAY

TO: Mr. Larry Mandel
University Auditor

FRESNO

FROM: Charles B. Reed
Chancellor

A handwritten signature in black ink, reading "Charles B. Reed", is written over the printed name of the Chancellor.

FULLERTON

HUMBOLDT

SUBJECT: KPMG Draft Final Report on the *Math and Computer Science Building Construction Project* at California State University, Bakersfield

LONG BEACH

LOS ANGELES

In response to your memorandum of August 20, 2008, I accept the response as submitted with the draft final report on the *Math and Computer Science Building construction project* at California State University, Bakersfield.

MARITIME ACADEMY

MONTEREY BAY

CBR/amd

NORTHRIDGE

Enclosure

POMONA

cc: Ms. Erika Alvord, KPMG

SACRAMENTO

Mr. Michael A. Neal, Vice President, Business and Administrative Services

SAN BERNARDINO

Ms. Colleen Nickles, Assistant Vice Chancellor, Financial Services

SAN DIEGO

Ms. Elvyra San Juan, Assistant Vice Chancellor, CPDC

Mr. Richard P. West, Executive Vice Chancellor and Chief Financial Officer

SAN FRANCISCO

SAN JOSÉ

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS