

**CALIFORNIA STATE UNIVERSITY, SACRAMENTO**

**MARIPOSA HALL**

Final Report

September 10, 2001

**PROJECT OVERVIEW**

The CSU - Sacramento project, designated Mariposa Hall, consisted of a new five-story classroom/office building of approximately 73,200 square feet. The building is steel framed with concrete fill metal deck at each elevated floor and roof and has aluminum curtain wall exterior cladding. The work included the relocation of an electrical substation, and the demolition of a 10,000 square foot single story building. Supporting utilities, site development, and landscaping were also included in the project. The project was constructed under the management of the Campus.

E. M. Kado Associates prepared plans and specifications for the project. KPMG reviewed project records from the following firms involved in the project's development and execution:

Contractor:	McCarthy (Newport Beach Office)
Architect/Engineer (A&E):	E. M. Kado Associates
Project Management (PM):	Val Verde Construction Management Association (V2CMA)
Inspection (IOR):	PK Engineering Services
Owner:	CSU – Sacramento

**CONSTRUCTION BID PROCESS**

The project was estimated by E. M. Kado to cost \$11,900,000. The original Notice to Contractors indicated a bid date of February 25, 1999. There were eight (8) responsive bidders listed on the Abstract of Bids. The low bidder, McCarthy, submitted a base bid in the amount of \$11,678,054. The initial specifications listed four (4) alternates. Addendum No. 1 added Alternate 5. The alternates are as follows:

<i>Alternate 1:</i>	Provide and install operable windows in curtain wall system.
<i>Alternate 2:</i>	Provide coating on decks at 2 <sup>nd</sup> , 3 <sup>rd</sup> , and 4 <sup>th</sup> floors in lieu of membrane roofing.
<i>Alternate 3:</i>	Provide design and installation of Sargent Magnetic Door Holders for scheduled doors.
<i>Alternate 4:</i>	Provide design and installation of Sargent Magnetic Door Holders for all faculty offices (88 doors).
<i>Alternate 5:</i>	Provide and install under all resilient flooring one of four specified coating systems.

Alternates 1 and 2 were accepted and incorporated into the original construction contract. A total of \$73,400 was added to the original bid and McCarthy was awarded the construction contract in the amount of \$11,751,454 (\$11,678,054 plus the additive alternates) on March 1, 1999.

Additional findings related to the project include:

- The Abstract of Bids was appropriately completed and signed.
- McCarthy furnished an appropriate Payment and Performance Bond in the original contract amount as required.
- McCarthy is a Missouri Corporation, registered to do business in California.
- The original construction period was to cover 425 calendar days.
- Liquidated damages were stated to be \$2,000 per day for the overall project.
- Supplementary General Conditions contained a milestone to complete initial electrical work within 30 days of the notice to proceed subject to \$2,000 for liquidated damages.
- Notice to Proceed was given on March 31, 1999, with a start date of April 1, 1999.
- Original completion was established as May 31, 2000.
- Notice of Completion was recorded as December 1, 2000 (183 days after the original completion date).
- Extensions of 181 days were included in four change orders that extended the final completion to November 29, 2000.
- There were four (4) allowances included in the original bid documents.

**CONTRACTOR COMPLIANCE - SUBCONTRACTING PRACTICES**

For this project, the "List of Proposed Subcontractors" (CM Form 701.04) identified 18 work divisions and subcontractors. The "Expanded List of Subcontractors" (CM Form 701.04 A), included the same 18 subcontractors. Our review found the following:

- AFA was listed as the underground utilities subcontractor. The University appropriately approved the substitution of Western Pipeline.
- Yag Manufacturing, Inc was listed as the architectural woodwork subcontractor. The University appropriately approved the substitution of Western Pipeline.

***Recommendation:***

None

**CONSTRUCTION CHANGE ORDERS**

There were 10 change orders totaling \$293,841 incorporating 115 Change Proposals (CPs) approved on the project. These changes added 2.5% to the contract amount, less than average for this type of project. The majority of all changes were attributable to unforeseen underground utilities. The project had three (3) Change Proposals in excess of \$20,000. They were:

CP 027	Relocation of PG&E High Pressure Gas Line (contractor did not charge a fee on this cost)	\$71,215
CP019	Revise Hydronic Piping to Building and Recovery Plan	\$47,926
CP097	Additional Work at Main and South Stairs	\$27,958

The project included provisions for four (4) allowances, all of which were credited in Change Order 2 in the amount of \$75,000. Typically allowances are included in base bids as estimates for work that will be completed under the base construction contract, but the exact costs are unknown at the time of bid. These amounts are later adjusted to actual costs, up or down, once the work is completed. It was unusual that the contract specifications included provisions for reimbursement to the University for these allowances. The breakdown of the four allowances is:

Allowance	Amount
1. Partnering	5,000
2. Facilities Management Overtime	10,000
3. Underground Utilities	20,000
4. Asbestos Abatement	40,000

As a normal step in reviewing change orders, we sampled change orders and traced subcontractor estimates to the actual subcontractor change orders. The Contractor furnished all subcontract files. KPMG reviewed approximately 98% of the total change orders. For all significant costs that were quoted by subcontractors, we were able to trace all subcontractor quotes/backup to change orders issued to the applicable subcontracts.

Although a departure from general conditions, we found that the University negotiated a reduced change order fee with McCarthy. The University paid a 5% mark-up on subcontracted work rather than the 15% allowed by contract. For McCarthy's own work, the University allowed 15% on the first \$50,000 in work, then 10% thereafter. This saved the University \$29,449 in change order costs. We found this negotiation in the best interest of CSU and the University appropriately documented the change in the Supplementary General Conditions. This approach is consistent with changes in the current General Conditions adopted as a result of prior audit recommendations.

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**CSU – Sacramento Mariposa Hall**  
**SSA-448**

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**Labor Burden:**

KPMG reviewed all change orders and found that McCarthy was paid a total of \$27,696 in labor costs, or 8.6% of total change order costs.

McCarthy charged hourly labor rates on change orders that included all burden costs. We found their method for calculations included mark-ups for retirement and bonuses in the amount of 18.5% that seemed excessive and not allowable by contract. We anticipate the actual amount should only include retirement benefits of approximately 3%. Since bonuses are, by nature, discretionary, the inclusion of this cost is in violation of the General Conditions that allows for only direct costs for payroll taxes, unemployment tax assessments, benefits, workman’s compensation, etc. While the impact of this overcharge was not material due to the relatively small amount of labor provided by the contractor on this project<sup>1</sup>, we note that such practices, if not monitored or reviewed, can result in significant non-allowable payments in cases where substantial labor charges are incurred.

Their payroll system posted actual costs to each payroll period. For example, once an employee’s wages exceeded the State Unemployment Insurance (SUI) limit the system would discontinue charging that cost. Additionally, it was obvious from the payroll data, only employees entitled to benefits were charged for them. Labor burden charged was as follows:

Management Employees Labor Burden Analysis	Burden Charged	to	Burden Charged	Average
Payroll Taxes - FICA	7.65%		7.65%	7.65%
Payroll Taxes - FUTA	0.08%		0.08%	0.08%
Payroll Taxes - State Unemployment	5.40%		5.40%	5.40%
Worker's Comp & Liability	0.66%		0.66%	0.66%
Health Benefits (management)	7.95%		12.06%	10.01%
Dental & Vacation (management)	6.36%	to	16.77%	11.57%
Overhead (401(k) and bonus accrual for mgmt.)	18.50%		18.50%	18.50%
<b>Total</b>	<b>46.60%</b>		<b>61.12%</b>	<b>53.86%</b>

Union Employees Labor Burden Analysis	Burden Charged	to	Burden Charged	Average
Payroll Taxes - FICA	7.65%		7.65%	7.65%
Payroll Taxes - FUTA	0.08%		0.08%	0.08%
Payroll Taxes - State Unemployment	5.40%		5.40%	5.40%
Worker's Comp & Liability	4.07%	to	8.41%	4.54%
Union Fringe	19.42%	to	35.15%	27.29%
<b>Total</b>	<b>33.21%</b>	<b>to</b>	<b>56.69%</b>	<b>44.95%</b>

<sup>1</sup> KPMG Consulting calculates the overcharge cost the University about \$2,000 on the total labor charge of \$27,000.

**Change Order Report Analysis:**

V2CMA provided a change order contingency log reflecting the reason for each change. With the exception of the failure to note reasons for two (2) CPs, the report accurately reflected all changes. Following is the result of that report:

Type of Change	C.O. Totals	% of CO	% of Contract
4.1 Errors/Omissions from the Contract Documents	\$46,663	15.88%	0.40%
4.2 Unforeseeable job site conditions	311,729	106.09%	2.65%
4.3 Regulatory agency, bldg. code, safety, health	38,619	13.14%	0.33%
4.4 Originated by the University	-24,550	-8.35%	-0.21%
4.5 Unavailability of specified materials	9,734	3.31%	0.08%
4.6 Other	-96,218	-32.74%	-0.82%
Not coded (2 CPs)	7,864	2.68%	0.07%
<b>Total Change Orders</b>	<b>\$293,841</b>	<b>100.00%</b>	<b>2.50%</b>
Original Contract Amount	11,751,454		
<b>Total</b>	<b>\$12,045,295</b>		

**Recommendations:**

1. CPDC should more clearly define in SUAM appropriate uses and processes for establishing allowances.
2. CPDC should provide University-wide guidelines for auditing labor burdens at the time construction contracts are awarded. This would establish acceptable mark-ups at the project start-up.

**Management Responses:**

1. We agree. We will implement procedures for future projects by November 30, 2001.
2. We agree. We will implement guidelines for future projects by November 30, 2001.

## **DESIGN COSTS**

This project was a “re-start” from an earlier designed project. E. M. Kado Associates’ contract dated July 1, 1992, was for \$617,716. CPDC had initially managed the project and \$439,752 was paid before the project was put on hold. The campus completed the bidding and construction administration phases under the new agreement to restart the project.

The University entered into an agreement with Kado to review previous plans and drawings, upgrade construction documents for conformance with current building codes, and to meet with University representatives to determine programmatic design changes. Subsequently, four (4) additional services were approved totaling \$386,301 that included \$246,000 for bidding and construction administration phases. We performed a detailed review of base contract and additional services. With the exception of an insignificant amount on Amendment 4, all phases and changes had been paid in full.

### ***Recommendation:***

None

**PROJECT MANAGEMENT/INSPECTION SERVICES**

V2CMA performed project management services and PK Engineering provided inspection services (IOR).

The University solicited proposals from two (2) firms for project management services. V2CMA was awarded the PM contract on the basis of a scored evaluation of the proposals of the competing firms as documented below.

<b>CSU – Sacramento CRITERIA</b>	<b>Maximum Points</b>	<b>RFP A</b>	<b>RFP B</b>
Similar Project Experience	10	9	9
Philosophy Applicable to Project	10	5	9
Project Specific Personnel	20	18	19
Previous University Experience	30	25	29
Cost	30	26	28
<b>Total Points</b>	<b>100</b>	<b>83</b>	<b>94</b>

The original project management agreement with V2CMA was executed on April 9, 1999 in the amount of \$120,150 and covered services for 14 months ending in June 2000. One additional service was authorized to extend services through August 2000. The project agreement and payments are as follows:

<b>V2CMA</b>	<b>Amount</b>
Original Agreement	120,150
Amend. 1 - Additional services through Aug 2000	10,000
<b>Total Revised Agreement</b>	<b>130,150</b>
<b>Construction Management Services Paid</b>	<b>129,738</b>

PK Engineering Services original inspection agreement was executed on May 28, 1999 in the amount of \$110,000 and covered services for 14 months ending in August 2000. Three additional services were authorized to extend services through October 2000 and provide assistance with project close-out. An open balance remains for the punch list work in the amount of \$3,040. The project agreement and payments are as follows:

<b>PK Engineering</b>	<b>Amount</b>
Original 1 - May 28, 1999 (14 months)	110,000
Amend. 1 - Engineering services through Aug. 31, 2000	10,000
Amend. 2 – Punch list	10,000
Amend. 3 - Engineering services through Oct. 31, 2000	3,000
<b>Total Revised Agreement</b>	<b>133,000</b>
<b>Inspection Services Paid</b>	<b>129,960</b>

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**SSA-448**

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Total fees paid for management and inspection services were \$259,698 and represented 2.16% of total construction costs. This amount is below industry standards of 2.5% to 3.5% for project management/inspection services. The table below places the project PM/IOF fees in the context of other projects reviewed as part of our CSU construction assurance work:

Project	Final Construction	Final PM Costs	Percent	Year
SL-98-500	9,000,000	839,943	9.33%	00-01
LB-610	10,651,263	680,000	6.38%	98-99
HA-434	8,908,995	360,878	4.05%	99-00
ST-462	13,040,983	501,048	3.84%	98-99
SJ-535	22,754,755	783,431	3.44%	99-00
SF-454	8,848,007	297,277	3.36%	97-98
PO-261	23,642,238	736,330	3.11%	00-01
CH-604	8,890,473	245,000	2.76%	99-00
SD-965R	32,521,297	860,892	2.65%	97-98
LA-443	22,895,615	602,705	2.63%	00-01
HU-437	8,885,916	224,243	2.52%	99-00
SL-475	26,084,489	590,187	2.26%	98-99
NO-496R	24,271,292	531,500	2.19%	98-99
SA-448	12,045,295	259,698	2.16%	00-01
SF-476	27,847,804	543,477	1.95%	98-99
LA-442	18,881,340	336,340	1.78%	97-98
CO-627B	26,112,338	459,451	1.76%	98-99 (Pre Completion)
SSU-1878	35,417,507	523,630	1.48%	00-01
SJ-200R	13,795,810	190,000	1.38%	99-00 (Limited Scope)
SM-460	12,534,361	160,643	1.28%	99-00 (Limited Scope)
SD-001-98	17,916,852	114,286	0.64%	00-01 (Limited Scope)
LB438	<i>(Not Evaluated)</i>			97-98 (Not Evaluated)
Totals	384,946,630	9,840,959	2.56%	

***Recommendation:***

None

**LIQUIDATED DAMAGES**

The original contractual completion date was extended by 181 days beyond the original completion date, which revised it to November 29, 2000. Notice of Completion indicated a December 1, 2000 completion date. The two-day shortage was due to an error on Change Order 5. Three (3) days were added that adjusted the completion date to June 3, however the change order’s revised completion date was typed as June 5.

The milestone completion date for the electrical work identified in the Supplementary General Conditions was not documented by a formal change order. The University furnished Daily Diary report dated April 25, 1999, that confirmed the work had been finished by the May 1, 1999, completion date.

Change Order 6 extended the completion date 30 days and indicated a revised date of July 5, 2000. The extension was due to labor disputes and inclement weather. Change Order 8 appropriately documented beneficial occupancy by the University and waived any liquidated damages as of the July 5<sup>th</sup> completion date. Change Order 10 provided 148 days to reconcile beneficial occupancy dates to completion of punch list items that occurred on December 1, 2000. This indicates that McCarthy had from July 5, 2000, to December 1, 2000, to complete the punch list, or 178 days.

It is often a challenge in the construction environment for contractor’s to expeditiously complete a project while it is Owner occupied. Six months appeared to be an unusual amount of time for McCarthy to complete the project. This suggests there were numerous or major items to be completed. It would be in the University’s best interest to accept a project that had limited flaws and near completion.

Summary of Time Extension Changes

<b>Description of CO</b>	<b>Tt. Days</b>	<b>Completion Date</b>
Original Completion Dates by Contract	425	31-May-00
Change Order 5 – Weather/Picketing	3	3-Jun-00
Change Order 6 – Weather/Labor Disputes	30	3-Jul-00
Change Order 10 – Reconciliation to completion of punch list	148	29-Nov-00
Days added by Change Orders	181	

***Recommendation:***

- Milestone completion dates should be clearly documented in contract change orders.

*Campus Response:*

3. We concur. During September 2001, Facilities Management reinforced the need for the staff and outside entities to ensure that milestone completion dates will be clearly documented in contract change orders. To clear this finding, we will provide a copy of the documentation that reinforces compliance with this process.

**MAJOR EQUIPMENT REVIEW**

The initial review of Contract Documents and Specification was performed at the University the week of March 26, 2001. The contractor furnished a submittal log in advance and we selected our sample from that log. Submittal records were provided and reviewed at the campus.

Of the submittals reviewed, all were traced from Project Specifications through submittal data and final acceptance. We found that the equipment specified was supported with required acceptance documentation. A project walk-through was conducted with representatives from campus personnel. The intent of this walk-through was to verify that specified and approved equipment had been provided and installed by the Contractor.

The following equipment items and specific model data were approved and visually confirmed as installed at the campus:

Div. #	Brand	Model #	Description
11450	Thermador	RDSS30QW	Thermador Range
15440	Thermador	SC301T	Thermador Oven
15440	Miele	DW680SC	Dishwasher (Installed DW681SC)
15440	Whirlpool	ET21PKXGN/W 46-315	Refrigerator
15440	Maytag	DWU 9962	Maytag Dishwasher
15160	Bell & Gossett	Series PL36	Bronze Booster Pumps
<b>15450</b>	<b>A O Smith</b>	<b>Lime Tamer 80 Plus</b>	<b>Water Heaters (Installed BTR200, 100 gal)</b>
15755	Bell & Gossett	SU860-2	Heat Exchangers Type SO U-Tube design
16325	GE Prolec	S32101	Liquid Filled Transformer

We found that the Miele dishwasher was actually upgraded from the approved specification at no additional cost to the University. The water heaters furnished varied from the specification. Although, the University was satisfied with the installed product, KPMG did not confirm if there was any price variance between the specified and installed water heaters.

***Recommendation:***

- The University should confirm whether or not a credit is due for the substitutions of the water heaters. Material substitutions of equipment and materials should be documented.

*Campus Response:*

4. We concur. Facilities Management reviewed the contract specifications and drawings relative to water heaters. Based upon that review, it was determined that the installed water heaters qualified as equal equipment. Since the value was determined to be equal, no credit is due to the university. To clear this finding, we will provide applicable documentation of the contract specifications, as well as documentation from the consulting mechanical engineer attesting that the installed water heaters were equal to the specified equipment.

In addition, during September 2001, Facilities Management reinforced the need for staff and outside entities to ensure substitutions of equipment and materials are clearly documented. To clear this finding, we will provide a copy of the documentation that reinforces compliance with this process.

# Memorandum

**To:** Mr. Larry Mandel  
University Auditor  
Office of University Auditor

**Date:** October 4, 2001

**From:** Richard P. West  
Executive Vice Chancellor and Chief Financial Officer  
Business and Finance

**RECEIVED**  
University Auditor  
OCT 12 2001  
The California State  
University

**Subject:** **Audit Report**  
Mariposa Hall, Project NO. SSA-448  
California State University, Sacramento

I am pleased that the overall report is positive and found general compliance with established procedures. I have reviewed the report's findings with my Capital Planning, Design and Construction (CPDC) staff and our specific comments to the auditors' findings and recommendations follow.

### Construction Change Orders

#### Recommendations:

1. We agree. We will implement procedures for future projects by November 30, 2001.
2. We agree. We will implement guidelines for future projects by November 30, 2001.

RPW:JRC:su

cc: Mr. J. Patrick Drohan  
Mr. James R. Corsar  
Mr. Robert Schulz



CALIFORNIA STATE UNIVERSITY, SACRAMENTO

OFFICE OF THE VICE PRESIDENT FOR ADMINISTRATION

September 28, 2001

Larry Mandel  
University Auditor  
The California State University  
401 Golden Shore  
Long Beach, CA 90802-4210

**RECEIVED**  
University Auditor

OCT 10 2001

The California State  
University

Subject: Campus Response to Recommendations of Audit Report SSA-448  
KPMG Construction Cost Review  
CSU, Sacramento - Mariposa Hall

Dear Mr. Mandel:

We submit the attached document as our response to the recommendations of the audit.

Corrective action has been implemented for all campus-related recommendations. By separate correspondence we will forward to Jim Usher the applicable documents evidencing completion of our corrective action for each recommendation. If you have any questions or require additional information, please contact Kathi McCoy, Manager of Auditing Services, at 916 278-7439.

Sincerely,

A handwritten signature in cursive script that reads "Edward C. Del Biaggio".

Edward C. Del Biaggio  
Vice President for Administration

Attachment

cc: M. Altier  
D. Gerth  
K. McCoy  
J. Self

California State University, Sacramento  
KPMG Construction Cost Review  
CSU, Sacramento Mariposa Hall  
Audit No. SSA-448

Recommendation 3: "Milestone completion dates should be clearly documented in contract change orders."

Campus Response: We concur. During September 2001, Facilities Management reinforced the need for the staff and outside entities to ensure that milestone completion dates will be clearly documented in contract change orders. To clear this finding, we will provide a copy of the documentation that reinforces compliance with this process.

Recommendation 4: "The University should confirm whether or not a credit is due for the substitutions of the water heaters. Material substitutions of equipment and materials should be documented."

Campus Response: We concur. Facilities Management reviewed the contract specifications and drawings relative to water heaters. Based upon that review, it was determined that the installed water heaters qualified as equal equipment. Since the value was determined to be equal, no credit is due to the university. To clear this finding, we will provide applicable documentation of the contract specifications, as well as documentation from the consulting mechanical engineer attesting that the installed water heaters were equal to the specified equipment.

In addition, during September 2001, Facilities Management reinforced the need for staff and outside entities to ensure substitutions of equipment and materials are clearly documented. To clear this finding, we will provide a copy of the documentation that reinforces compliance with this process.

THE CALIFORNIA STATE UNIVERSITY  
OFFICE OF THE CHANCELLOR

BAKERSFIELD

CHANNEL ISLANDS

October 17, 2001

CHICO

MEMORANDUM

DOMINGUEZ HILLS

FRESNO

TO: Larry Mandel  
University Auditor

FULLERTON

FROM: Charles B. Reed  
Chancellor

HAYWARD

HUMBOLDT

SUBJECT: KPMG Peat Marwick Draft Final Report on the *Mariposa Hall*  
Project (SSA-448) at California State University, Sacramento

LONG BEACH

LOS ANGELES

In response to your memorandum of October 17, 2001, I accept  
the response as submitted with the draft final report on the  
*Mariposa Hall* Project at California State University, Sacramento.

MARITIME ACADEMY

MONTEREY BAY

CBR:amd

NORTHRIDGE

Enclosure

ODONA

cc: Donald R. Gerth, President  
Richard P. West, Executive Vice Chancellor and  
Chief Financial Officer

SACRAMENTO

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSE

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS