

**CALIFORNIA STATE UNIVERSITY, CHANNEL ISLANDS
PHASE 1 TENANT IMPROVEMENTS**

Final Report

June 23, 2000

**KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604**

PROJECT OVERVIEW

The CSU Channel Islands Tenant Improvement project consisted of the conversion of approximately 100,000 square feet of existing buildings from hospital space to classroom space. Phase I of the project included classroom/teaching space while Phase II covered non-classroom/teaching space. Work included the removal and replacement of interior walls and ceilings, hardware upgrades and remodels of mechanical and electrical systems. CSU Capital Planning, Design, and Construction (CPD&C) managed this project.

KPMG reviewed project records from the following firms that were involved in the project's development and execution:

Contractor: Cox Construction Co. (Vista office)
Architect/Engineer (A/E): Bobrow/Thomas & Associates
Project Management (PM): Hoffman and Associates

In addition to the firms above, KPMG reviewed University records furnished by CPD&C.

At the time of this review, the Contractor had not yet invoiced the final change order that was in process at the time of the review. Since the review, KPMG received a copy of the final settlement change order in the amount of (\$1,525) dated April 19, 2000.

CONSTRUCTION BID PROCESS

This project, designed by Bobrow/Thomas, was estimated at \$8,500,000. The original Notice to Contractors indicated a bid date of October 13, 1998, that was changed by Bid Addendum #1 to October 15, 1998. Of the 15 bidders listed on the Abstract of Bids, 13 responded with bid submissions. The low bidder, Cox Construction, submitted a base bid in the amount of \$6,320,000 and was awarded the construction contract on October 22, 1998. The initial specifications listed two fixed-amount deductive alternates and six additional deductive bid alternates; none of which were accepted at the time of contracting.

Additional findings related to the project include:

- The Abstract of Bids was appropriately completed and signed
- Cox Construction furnished an appropriate Payment and Performance Bond in the original contract amount as required
- Cox Construction Co. is a California Corporation
- The original construction period was to cover 340 calendar days
- Liquidated damages were stated to be \$2,000 per day (total project)
- Liquidated damages were stated to be \$4,000 per day (Phase I)
- Notice to Proceed was given on November 10, 1998

KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604

- Original completion was established as October 16, 1999
- Original completion for Phase I was established as July 30, 1999
- An extension of 18 days was included in Change Order No.13 during the construction period extending the Phase I completion date to August 17, 1999, and according to CPD&C, the final completion date to November 6, 1999
- A 63-day extension was granted in the final “settlement change order” that extended the completion to January 5, 2000
- Notice of Completion was recorded on January 24, 2000, indicating a completion date of January 5, 2000. The project was substantially complete as of November 17, 1999.

CONTRACTOR COMPLIANCE - SUBCONTRACTING PRACTICES

The "List of Proposed Subcontractors" (CM Form 701.04) and the "Expanded List of Subcontractors" (CM Form 701.04 A) included 12 subcontractors. There were no substitutions or omissions of subcontractors required to be listed.

Recommendations:

None

CONSTRUCTION CHANGE ORDERS

There were 27 change orders totaling \$2,570,473 incorporating 360 Change Order Requests (CORs) issued on the project. Change Order No. 27, in the amount of (\$1,525), representing the “final settlement” was approved subsequent to our review on April 28, 2000. These changes revised the original contract amount of \$6,320,000 to \$8,890,473, a 40.67% increase.

The buildings renovated in the project were originally constructed in 1935. The age of the target facilities made it likely that this project would incur more than the typical change order costs, however 40% is extraordinary. The University voiced concerns about the lack of research of the existing conditions of the buildings on the part of the A/E firm. Additionally, they found the A/E plans and specifications “weak.” We determined in our specification review that the A/E firm appeared to use “canned” specifications, inadequate for these types of buildings. This is supported by the 12.7% of change orders attributable to A/E errors and omissions. (See discussion under Change Order Report Analysis, below).

The “Change Order Summary,” a CPM report furnished by CPD&C, did not accurately report all approved change orders. The “Change Proposal Detail” report, another CPD&C (CPM) report, did accurately reflect changes (excluding the last two changes totaling \$22,446.) The payment history furnished by the accounting department of the Chancellor’s Office accurately reported the change orders.

KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604

The Change Order “Contingency Report” prepared by the PM correctly identified change orders (with the exception of the final “settlement change”). Although the PM report indicated the reason code for each change, the report did not recap totals by reason code. As part of the settlement process, CPD&C extrapolated this information and provided KPMG with a recap of change by “reason” code. (See table, below).

Change Order Analysis:

KPMG sampled change orders and traced all subcontractor estimates to the actual subcontractor change orders. The Contractor furnished subcontract files and provided a “WIP (Work in Process) Estimated Costs of Contract” report that showed each subcontract and change orders issued thereto. The Contractor’s records in excellent order and we found the staff fully cooperative with our audit efforts. KPMG sampled change orders totaling \$1,294,736, or 50.3% of total changes. We were able to trace all subcontractor quotes presented in CSU change orders to actual subcontractor change orders.

KPMG noted the following included in our sampling of change orders:

- **Change Order No. 11** - The original contract included two allowances: landscape and irrigation at entrances in the amount \$60,000, and parking at west courtyard in the amount of \$90,000.

CSU chose to eliminate the Scope of Work covered in these two allowances and requested that the unused balance of funds be returned to the University. The Contractor had begun initial work in these areas and incurred costs of \$2,000 for preliminary parking work and \$9,000 for preliminary landscape/irrigation work. In Change Order No. 11, Cox Construction credited the balances of the parking allowance (\$88,000) and the landscape allowance (\$51,000). In addition, CPD&C recovered an additional \$1,421 for the two allowances in the final CO No. 27. The credits were accurately issued and are reflected as 4.4 changes.

- **Change Order No. 13** – This change added 18 days to the construction schedule and clearly amended the completion date for Phase 1 from July 30, 1999, to August 17, 1999. It is unclear whether this extension also extended the final completion date. The extension was listed as “calendar days time extended,” which suggested that this was an extension to the overall construction agreement. CPD&C confirmed that the extension applied to the final complete date as well and therefore extended completion to November 3, 1999.

Change Order Report Analysis:

KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604

- Although the PM’s Change Order Log reflected the “reason code” of each Change Proposal, (with the exception of the final “settlement change order”), the report was not subtotaled by reasons. CPD&C provided the subtotals. Following is the result of that analysis:

<u>Type of Change</u>	<u>C.O. Totals</u>	<u>% of CO</u>	<u>% of Contract</u>
4.1 Errors/Omissions from the Contract Documents	\$ 802,895	31.24%	12.70%
4.2 Unforeseeable job site conditions	338,424	13.16%	5.36%
4.3 Regulatory agency, bldg. code, safety, health	28,016	1.09%	.44%
4.4 Originated by the University	- 174,631	- 6.79%	- 2.76%
4.5 Unavailability of specified materials	0	0.00%	.00%
4.6 Other	1,575,769	61.30%	24.93%
Total Change Orders	\$ 2,570,473	100.00%	40.67%
Original Contract Amount	<u>6,320,000</u>		
Total	\$ 8,890,473		

Changes attributable to Error/Omissions from the Contract Documents are significantly higher than other CSU project previously reviewed and higher than industry standards. In addition to those changes coded as 4.1, CPD&C identified 75% of the 4.6 (Other Changes) that they believed to be attributable to errors and omissions. Determination of the classification of change orders (performed by the project manager) is a somewhat subjective judgement. It appeared that the PM had difficulty in identifying some changes reasonably attributable to the A/E firm. The combination of coded 4.1 changes and 4.6 changes suspected to be attributable to E/O could be in excess of 30% of the contract amount. For a comparison with past CSU projects, KPMG prepared the following analysis:

Audit Year	Project	E/O Changes
FY 2000	Moss Landing	1.55%
	San Marcos	2.27%
	Humboldt	4.17%
	San Jose	1.55%
FY 1999	Long Beach	6.00%
	San Luis Obispo	3.80%
	San Francisco	2.30%
	Stanislaus	1.80%
FY 1998	Northridge	2.50%
	Los Angeles	5.90%
	San Diego	2.90%
	San Francisco	0.40%

Excludes projects if total information was not available

We reviewed the CPD&C CMP “Change Order Summary” and the “Change Proposal Detail” reports. We found that the summary report listed CO No. 1 as \$3,072,800 rather than \$192,050, 15 times the actual amount. The detail report did not correctly reflect totals by reason code.

Recommendations:

KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604

1. CPD&C should request that the A/E firm address error and omission change orders and recover appropriate reimbursement from the A/E for change order costs incurred by CSU.
2. If CPD&C continues to utilize the CPM system, it should be “de-bugged” and re-formatted so that it functions as an effective project management tool.

Management’s Response:

1. The subject of excessive errors and omissions change orders has been addressed to the design architects. The amount of changes was very large compared with the bid cost, but only exceeded the construction estimate by 4.6%. The architects performed substantial extra services during construction to enable the University to occupy the facilities on-time for use by their first student body. The CSU negotiated with the architects for free extra services in exchange for non-recovery of excessive costs due to changes. The two parties are in verbal agreement with this settlement.
2. We agree. We will make modifications to CPM by November 30, 2000.

DESIGN COSTS

Bobrow Thomas and Associates, Inc. design costs are supported by an agreement dated December 23,1997. The original agreement was amended by three extra service authorizations (ESA) that totaled \$179,246.27 adjusting the total commitment to \$857,775.28.

The CPM system reported the same extra services as found during our review. The CSU accounting record indicated a balance on the contract of \$68,479.30 although reviewed invoices indicated that the total agreement had been paid. As in prior reviews, we found the current practice of maintaining independent reporting systems (CSU accounting and the CPM commitment system) inefficient and in need of immediate improvement.

Agreement/Payment Analysis:

Comparing the four previously reviewed projects this fiscal year, KPMG found the A/E invoices were clearly presented and were able to be reconciled to the overall commitment. The following table shows a breakdown for each phase included in the design agreement and each ESA.

<u>Source</u>	<u>Commitment</u>	<u>Invoices</u>
Schematic Design	\$128,920.51	\$128,920.51
Design Development	94,994.06	94,994.06
Construction Docs.	259,130.23	259,130.23

KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604

Bidding/Negotiating	27,276.87	27,276.87
Construction Admin.	168,207.34	168,207.34
Original Contract	<u>\$678,529.01</u>	<u>\$678,529.01</u>
ESA #1 - Landscape	42,927.27	42,927.27
ESA #2 - Skipped		
ESA #3 - Telecommunications	131,791.00	131,791.00
ESA #4 - CP26, 183, 185	<u>4,528.00</u>	<u>4,528.00</u>
Total A/E Services	\$857,775.28	\$857,775.28

Recommendations:

3. CSU should reconcile final accounting records that reflect a \$68,479 balance on the A/E agreement to the processed invoices reviewed in CPD&C files before further payments are made to the A/E firm.

Management's Response:

3. CPDC and the AE firm have reviewed the contract, extra services, and payments to date, and we are in agreement that the contract will be paid in full upon the release of the final Record Drawing fee component that is currently being withheld.

Future projects will be administered with an improved system to track AE invoices in greater detail, and the system will be improved by November 30, 2000.

PROJECT MANAGEMENT SERVICES

Hoffman and Associates performed general on-site project management/inspection services for this project.

The PM provided project management and inspection services. The original fee for inspection services represented 2.8% (\$180,000/\$6,320,000) of the original construction agreement. When considering amendments, the total PM fee equated to \$245,000, or 2.76% of the final construction costs including change orders. The table below places the project PM cost in the context of our prior reviews.

KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604

Project	Final Construction	Final PM Costs	Percentage
LB-610	10,651,263	680,000	6.38%
ST-462	13,040,983	501,048	3.84%
SJ-535	22,754,755	783,431	3.44%
SF-454	8,848,007	297,277	3.36%
CI-604	8,890,473	245,000	2.76%
SD-965R	32,521,297	860,892	2.65%
HU-437	8,885,916	224,243	2.52%
SL-475	26,084,489	590,187	2.26%
NO-496R	24,271,292	531,500	2.19%
SF-476	27,847,804	543,477	1.95%
LA-442	18,881,340	336,340	1.78%
CO-627B	26,112,338	459,451	1.76%
SM-460	12,534,361	160,643	1.28%
LB438			
Totals	241,324,318	6,213,489	2.57%

The original construction inspection agreement was executed on October 27, 1998, in the amount of \$180,000, including expenses of \$500. The original agreement covered approximately 11 months and three weeks. The subsequent amendments added \$65,000 to the fee and extended the contract through January 31, 2000 (three months), which is proportionate to the actual completion date of January 5, 2000.

Agreement/Payment Analysis:

The table below summarizes the total encumbrances and costs for project management services:

Service Agreement & Payment							
Source	Period	\$52.00/hr Sr. Proj Manager	\$53.50/hr Project Manager	\$51.50/hr Inspector of Record	\$12.00/hr Student Asst.	Supplies	Total
Agreement	Nov-8-98 to Oct-10-99	5,000.00	103,000.00	70,500.00		1,500.00	180,000.00
Amend. 1	Student Asst. \$8/hr				5,000.00		5,000.00
Amend. 2	Student increase \$12/hr				3,000.00		3,000.00
Amend. 3	Inspector thru Aug-27-99			30,000.00			30,000.00
Amend. 4	PM and Insp. to Dec-31-99		6,000.00	6,000.00			12,000.00
Amend. 5	PM and Insp. to Jan-31-00		7,500.00	7,500.00			15,000.00
		5,000.00	116,500.00	114,000.00	8,000.00	1,500.00	245,000.00

Payments	Invoice Date					
2010	5-Mar-00		2,033.00	1,081.50	156.00	3,270.50
2010	5-Mar-00		(1,661.29)			(1,661.29)
2001	10-Jan-00		5,564.00	2,369.00	504.00	8,491.32
9968	10-Dec-99		6,848.00	3,605.00	432.00	10,885.00
9963	5-Nov-99		8,988.00	1,699.50	996.00	12,169.22
9959	5-Oct-99		8,988.00	5,871.00	1,128.00	15,987.00
Missing	1-Sep-99		8,988.00	8,982.00	1,200.00	19,170.00
9950	1-Aug-99		10,432.50	8,806.50	852.00	20,091.00

**KPMG Construction Cost Review
 CSU -Channel Islands Phase I Tenant Improvement
 CI-604**

9946	7/1/1999 (2 Inspectors)		10,058.00	12,025.25	1,080.00		23,163.25
9940	5-Jun-99		9,202.00	11,330.00	1,362.00		21,894.00
9935	5-May-99		9,416.00	11,536.00	1,452.00	1,232.00	23,636.00
9928	5-Apr-99		9,844.00	11,330.00	1,032.00		22,206.00
9920	5-Mar-99		8,560.00	9,424.50	760.00		18,744.50
9910	5-Feb-99		8,560.00	8,343.00	728.00		17,631.00
9902	5-Jan-99		13,696.00	14,986.50	640.00		29,322.50
	TOTAL PAYMENTS	-	119,516.21	111,389.75	12,322.00	1,772.04	245,000.00
Balance	Over/(Under) agreement	(5,000.00)	3,016.21	(2,610.25)	4,322.00	272.04	0

Although the overall project agreement was not exceeded, funds for professional services not provided were used to cover student clerical service in excess of approved agreement amounts.

Recommendations:

4. Payments should be made against funds approved for contract specifics or amendments to adjust spending allocation should be issued.

Management's Response:

4. We agree that specific services should have established unit costs. Services are performed as directed and billed to appropriate unit costs. It is not essential to track use of individual units established by estimates since all services are performed as directed and monitored monthly when billed. Flexibility within service agreements avoids excessive amendments, which add no administrative value. We will add guidance to SUAM by November 30, 2000.

LIQUIDATED DAMAGES

While performing file reviews at CPD&C in March, the Contractor presented a bound response to CPD&C correspondence that asserted time overruns and liquidated damages and requested compensation in the amount of \$49,200 for extended overhead. The contractor took exception with the January 5, 2000 completion date and claimed that the University took possession on November 19, 1999. We found documentation from CPD&C indicating that possession took place on November 17, 1999. As part of closing out the construction contract, CPD&C proposed several change order settlements and ultimately all parties settled on Change Order 27, Revision 2. Following is an analysis of the adjusted completion:

Phase I \$4,000/Day

Total Project \$2,000/Day

**KPMG Construction Cost Review
 CSU -Channel Islands Phase I Tenant Improvement
 CI-604**

Contractual completion date:	July 30, 1999	October 16, 1999
Change Order 13	Added 18 Days	Added 18 Days
Revised date:	August 17, 1999	November 6, 1999
Beneficial occupancy:	August 17, 1999	November 17, 1999
Days late:	None	11 Days
Liquid damages if assessed:	\$0	\$22,000
Settlement Change Order 27		Added 63 Days
Revised date (Notice of Completion):		January 5, 2000

As shown above, the Notice of Completion was filed much later than the date the University took possession. The Contractor remained on site to complete punch list items and project close-out. CPD&C was able to negotiate contractor claims out of the settlement in lieu of assessing liquidated damages and further received a credit in the amount of \$1,525. We found documentation adequate that supported their position.

Recommendations:

- Although we recognize the importance of keeping projects on schedule, when substantive delays occur due to unanticipated conditions, CSU should negotiate time extensions as they occur. This approach creates a cooperative spirit and reduces final “settlement” change orders, contractor claims and trade-offs.

Management’s Response:

- We agree. Timely resolution of all claims is our standard procedure, and was practiced on this project. We will add language to SUAM by November 30, 2000, which will strengthen intent to resolve all claims and delay impacts as soon as practical.

MAJOR EQUIPMENT REVIEW

The initial review of Contract Documents consisting of Project Specifications was performed in the CPD&C office on March 22-24, 2000. Subsequently, we reviewed actual submittal documentation at the Contractor’s office on March 27, 2000. KPMG visited the campus on April 17 and 18, 2000. The following specification sections were reviewed:

Division	14420	Wheelchair Lift
Division	15100	Valves
Division	15430	Plumbing Specialties
Division	15440	Plumbing Fixtures
Division	15540	HVAC Pumps
Division	16165	Motor Control Centers
Division	16426	Service and Distribution Switchboards

KPMG Construction Cost Review
CSU -Channel Islands Phase I Tenant Improvement
CI-604

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 on April 17 and 18, 2000, with representatives from campus engineering personnel in attendance. The intent of this walk-through was to verify that specified and approved equipment had been provided and installed by the Contractor. Of the areas selected for review, all sampled specified manufacturers equipment had been installed.

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

Div. Section	Equipment Distribution	Specified/Approved Manufacturers	Submitted Model
14420	Wheelchair Lift	Abbey Access	Porch Lift PL-S
15100	Valves		
	Gate Valves	Nibco	T-590-Y
15430	Plumbing Specialties		
	Hose Bibbs	Ancon	HB1or2 Model 8131 or 8141
		Chicago Faucet	HB3#305
	Floor Drains	Smith	FD-1 Model #2005 AorB
15440	Plumbing Fixtures		
	Water Closet	American Standard, Inc	AF WALL EL 1.6
	Urinal	American Standard, Inc	All Brook 1.0
	Lavatory	American Standard, Inc	Lucerne Wall-hung 0356.041
	Water Cooler	Haws Drinking Faucet Co.	HWBFA8FHWBFA8ET
15540	HVAC Pumps	Paco Inc.	FM Series CE2008
16165	Motor Control Centers	Square D	Freedom Series 2100
16426	Svc/Dist. Switchboards	Cutler Hammer	Pow-R-Line C
16461	Transformers	Cutler Hammer	V46D47T33H

Recommendations:

None

CLOSE-OUT DOCUMENTS

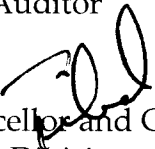
As part of the final review process at the campus, KPMG visited the engineering office and found that the warranties, operating and maintenance manuals and as-built drawing were received and on file at the campus. The Project Closeout Checklist was appropriately approved by the A/E, Campus and PM.

Recommendations:

None

Memorandum

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

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

Subject: **Audit Report**
Phase 1 Tenant Improvements, CI-604
California State University, Channel Islands

Date: September 1, 2000

RECEIVED
University Auditor

SEP 01 2000

The California State
University

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.

Change Orders

Recommendations:

1. The subject of excessive errors and omissions change orders has been addressed to the design architects. The amount of changes was very large compared with the bid cost, but only exceeded the construction estimate by 4.6%. The architects performed substantial extra services during construction to enable the University to occupy the facilities on-time for use by their first student body. The CSU negotiated with the architects for free extra services in exchange for non-recovery of excessive costs due to changes. The two parties are in verbal agreement with this settlement.
2. We agree. We will make modifications to CPM by November 30, 2000.

Design Costs

Recommendations:

3. CPDC and the AE firm have reviewed the contract, extra services, and payments to date, and we are in agreement that the contract will be paid in full upon the release of the final Record Drawing fee component that is currently being withheld.

Future projects will be administered with an improved system to track AE invoices in greater detail, and the system will be improved by November 30, 2000.

Memo to Mr. Mandel
August 17, 2000
Page Two

Project Management Services

Recommendations:

4. We agree that specific services should have established unit costs. Services are performed as directed and billed to appropriate unit costs. It is not essential to track use of individual units established by estimates since all services are performed as directed and monitored monthly when billed. Flexibility within service agreements avoids excessive amendments, which add no administrative value. We will add guidance to SUAM by November 30, 2000.

Liquidated Damages

Recommendations:

5. We agree. Timely resolution of all claims is our standard procedure, and was practiced on this project. We will add language to SUAM by November 30, 2000, which will strengthen intent to resolve all claims and delay impacts as soon as practical.

RPW:WCH:su

cc: Mr. J. Patrick Drohan
Mr. W. Clifford Hahn

THE CALIFORNIA STATE UNIVERSITY
OFFICE OF THE CHANCELLOR

BAKERSFIELD

CHANNEL ISLANDS

September 5, 2000

CHICO

DOMINGUEZ HILLS

MEMORANDUM

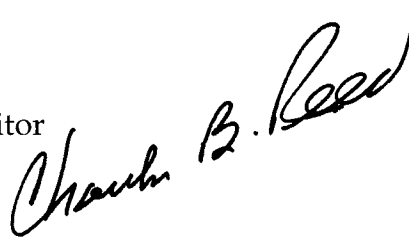
FRESNO

TO: Larry Mandel
University Auditor

FULLERTON

HAYWARD

FROM: Charles B. Reed



HUMBOLDT

SUBJECT: KPMG Peat Marwick Draft Final Report on the *Phase 1 Tenant Improvements* Projects at California State University, Channel Islands

LONG BEACH

LOS ANGELES

MARITIME ACADEMY

In response to your memorandum of September 5, 2000, I accept the response as submitted with the draft final report on the *Phase 1 Tenant Improvements* Projects at California State University, Channel Islands.

MONTEREY BAY

NORTHRIDGE

POMONA

CBR/cw

SACRAMENTO

Enclosure

SAN BERNARDINO

cc: Richard P. West, Executive Vice Chancellor and Chief Financial Officer/Business and Finance

SAN DIEGO

SAN FRANCISCO

SAN JOSE

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS