

**CALIFORNIA STATE UNIVERSITY, SAN MARCOS  
ACADEMIC II – BUILDING 15**

Final Report

May 19, 2000

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

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**PROJECT OVERVIEW**

The CSU - San Marcos Building 15 project consisted of a new 72,000 sq. ft. four story classroom/office building, site improvements and utility expansions. Construction was steel-framed with a stucco and stone clad exterior. 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: Swinerton & Walberg Company (San Diego office)  
Architect/Engineer (A&E): Rossetti Associates  
Project Management (PM): TSC Consultants, LLC

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

**CONSTRUCTION BID PROCESS**

The Academic II – Building 15 project, designed by Rossetti Associates, was estimated at \$12,627,000. The original Notice to Contractors indicated an initial bid date of October 22, 1996. Through subsequent addenda, the bid date was revised to November 26, 1996. Seven bidders were listed on the Abstract of Bids. The low bidder, Swinerton & Walberg, submitted a base bid in the amount of \$11,200,000 and was awarded the construction contract on December 5, 1996. The initial specifications listed three deductive 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
- Swinerton & Walberg furnished an appropriate Payment and Performance Bond in the original contract amount as required
- Swinerton & Walberg is a California Corporation
- The original construction period was to cover 535 calendar days
- Liquidated damages were stated to be \$2,000 per day
- Notice to Proceed was given on January 6, 1997
- Original completion was established as June 24, 1998
- Notice of Completion was recorded as January 4, 1999 (194 days late)
- Extensions of 107 days were included in four change orders throughout the construction period; a 76 day extension was granted in the final “global change order,” which extended the completion to December 24, 1998, 11 days short of the date indicated on the Notice of Completion
- There was one allowance established in the original bid documents.

## **CONTRACTOR COMPLIANCE - SUBCONTRACTING PRACTICES**

The "List of Proposed of Subcontractors" (CM Form 701.04) included 23 work divisions. The "Expanded List of Subcontractors" (CM Form 701.04 A), included 22 subcontractors. Our review found the following:

- The masonry subcontractor, Faber, was not listed on the "Expanded List" although it was included on the "Proposed List." The masonry subcontract amount was less than  $\frac{1}{2}$  of 1% and therefore not required to be listed on either list under the California Public Contract Code (CPC 4110).
- Classic Tile was not listed on the Proposed or Expanded List of Subcontractors. The stonework subcontract, as reported on the Contractor's "Subcontract Change Order" report and the "Job Cost Ledger" reflected a subcontract in the amount of \$63,200, which exceeded  $\frac{1}{2}$  of 1% of the original construction contract. Upon submission of our draft report, CPD&C obtained a copy of Swinerton & Walberg's subcontract to Classic Tile in the amount of \$55,800, which would have been below the listing threshold. We are unable to determine (as of the date of this writing) why there is a discrepancy between the Contractor's accounting reports and the subcontract document submitted to CPD&C. We expect that Swinerton & Walberg's accounting reports would have reflected accurate information.
- Johnson-Kinsey was listed as the plaster/drywall subcontractor. Lawrie performed the work. The request for substitution was sent to the campus but was not formally approved by CPD&C. CPD&C has been unable to produce appropriate documentation of approvals for the plaster/drywall substitution.

### ***Recommendations:***

1. For Classic Tile, CPD&C should request additional information to fully support why the Contractor's accounting reports do not accurately reflect the amount of the subcontract furnished to CPD&C and request an explanation why Classic Tile was paid more than the subcontract amount. If it is found that the Classic Tile subcontract amount was in fact \$63,200, Swinerton and Walberg should be assessed the full penalty allowed by California Public Contract Code.
2. CPD&C should assure that appropriate documentation is received from all contractors for substitutions of subcontractors. If approvals were not properly requested and approved, the Contractor should be assessed appropriate penalties, if any, according to the Section 4110 of the Public Contract Code.

### ***Management's Response:***

1. We have requested additional information from the Contractor. They provided an executed copy of the subcontract agreement between Swinerton & Walberg, and Classic Tile, the subcontractor. The value of the agreement was \$55,800, which was less than  $\frac{1}{2}$  percent of the initial contract bid and was for subcontractor

installation work. They have explained that they also issued a separate purchase agreement for materials only, also with Classic Tile in the amount of \$63,200. This appears to explain the audit findings.

2. We agree. Procedures to monitor use of subcontractors have been implemented, and the Contract General Conditions revised January 2000 now provide a subcontractor status report from the General Contractor. We are satisfied with the Contractor's explanations on this project (a copy of the Contractor's explanations was acknowledged in your report), and find no penalties required.

## **CONSTRUCTION CHANGE ORDERS**

There were 73 change orders totaling \$1,334,361 incorporating 205 Change Proposals (CP) issued on the project. These changes added 11.91% to the contract amount.

The "Change Order Summary," a CPM report furnished by CPD&C, was incomplete and underreported change orders by \$331,631. The "Change Proposal Detail" report, another CPD&C (CPM) report, was also incomplete. It appeared that that change order data was entered after the project was underway as the report did not include 23 of the first 26 change orders issued against the construction agreement.

The PM's change order log was not included in CPD&C files. At the time of review, KPMG requested that the PM file be sent electronically. We did receive the file and reconciled the report to actual change orders issued by the University.

The payment history furnished by the accounting department of the Chancellor's Office accurately reported the correct change orders.

### **Change Order Analysis:**

The project included provisions for one \$250,000 allowance to cover the cost for University telecommunications cabling. The allowance was credited to the University in Change Order No.3 and later the cabling work was added back in Change Order No. 26. Actual cost for the work was \$254,831. The additive Change Order was appropriately documented.

As a normal step in reviewing change orders, we sampled change orders and traced all subcontractor estimates to the actual subcontractor change orders. The Contractor furnished subcontract files and provided a "Subcontractor Change Order Status" report. The owner, as detailed in the table below, overpaid change orders in the amount of \$13,750. The results of our tabulation are summarized below:

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

| CO #                     | Item # | Subcontractor/ Description | Quoted&Paid By CSU | Amount Pd to Sub | Difference | W/ 15% Db 6% Cr Fee | Reference/ Sub CO # |
|--------------------------|--------|----------------------------|--------------------|------------------|------------|---------------------|---------------------|
| 6                        | 5.1    | Marathon Cutting           | 2,217              | 1,992            | (225)      | (259)               | CO 1 (4 items)      |
| 6                        | 5.4    | Hale Engineering           | 1,199              | 933              | (266)      | (306)               | Sub Report          |
| 9                        | 9.2    | Marathon Cutting           | 670                |                  | (670)      | (771)               | None Issued         |
| 9                        | 9.2    | Marathon Cutting           | 588                |                  | (588)      | (676)               | None Issued         |
| 9                        | 9.2    | Hale Engineering           | 444                |                  | (444)      | (511)               | None Issued         |
| 9                        | 9.2    | Law/Crandall               | 4,500              | 4,285            | (215)      | (247)               | Orig. Contract      |
| 25                       | 25.1   | Fontana Steel              | 2,978              |                  | (2,978)    | (3,425)             | CO 5                |
| 32                       | 32.1   | Landscape Credit           | (13,550)           | (13,550)         |            | (813)               | No Credit for Fee   |
| 56                       | D      | Add Carpet                 | 3,045              |                  | (3,045)    | (3,502)             | Dupl. in OCO 55     |
| 73                       | 73.3   | Bighorn                    | 2,006              |                  | (2,006)    | (2,307)             | Sub Report          |
| 73                       | 73.12  | Sherwood Mech.             | (1,120)            | (2,000)          | (880)      | (933)               | CO 27               |
| <b>Total Differences</b> |        |                            |                    |                  |            | <b>(13,750)</b>     |                     |

Subsequent to our draft report, CPD&C requested that the Contractor explain these differences. Their response was (with the exception of the duplicated carpet) that change orders do not necessarily represent firm commitments to subcontractors and that either they self-perform the work or had other subcontractors perform change order work. Further, the Contractor noted that CSU did not require that submitted change order quotes from subcontractors reflect change orders negotiated with subcontractors. CSU has subsequently implemented this requirement for future projects.

The Contractor agreed that a credit is due CSU in the amount of \$3,502 and agreed to issue a check refund.

**Change Order Report Analysis:**

- The PM Change Order Log did not appear to be submitted on a regular basis nor did it track construction contingency balance.
- In our analysis of the PM Change Log, Change Order No. 3 was listed at \$10,000 less than the actual change order. (This is reflected in the 4.6 "Type of Change" below.) Change Order 49 was listed as \$2,980 greater than the actual change order. Although the report was not sorted by reason code, with the exception of CO 49, we were able to extract totals by reason code. Following is the result of that analysis:

| Type of Change                                    | C.O. Totals         | % of CO        | % of Contract |
|---|---------------------|----------------|---------------|
| 4.1 Errors/Omissions from the Contract Documents  | \$254,238           | 19.05%         | 2.27%         |
| 4.2 Unforeseeable job site conditions             | 1,122,960           | 84.16%         | 10.03%        |
| 4.3 Regulatory agency, bldg. code, safety, health | 132,926             | 9.96%          | 1.19%         |
| 4.4 Originated by the University                  | 129,120             | 9.68%          | 1.15%         |
| 4.5 Unavailability of specified materials         | 4,153               | 0.31%          | 0.04%         |
| 4.6 Other (Includes the CO 3 \$10,000)            | -306,056            | -22.94%        | -2.73%        |
| Change Order 49 error                             | -2,980              | -0.22%         | -0.03%        |
| <b>Total Change Orders</b>                        | <b>\$1,334,361</b>  | <b>100.00%</b> | <b>11.92%</b> |
| Original Contract Amount                          | 11,200,000          |                |               |
| <b>Total</b>                                      | <b>\$12,534,361</b> |                |               |

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

---

- CPM (CPD&C) report entitled “Change Order Summary” was missing numerous change orders and was understated by \$331,631.

***Recommendations:***

3. 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.
4. CSU should confirm that a refund check is received in the amount \$3,502 for carpet duplication included in CO 55 and CO 56.

***Management’s Response:***

3. We agree. We will either make modifications to CPM or make a decision to implement an alternate cost tracking system by November 30, 2000. Most campuses are using alternate’ systems of tracking project costs.
4. We agree. The contractor agrees to reimburse the duplicated item.

**DESIGN COSTS**

Rossetti & Associates originally designed this project in 1992. Since that time, the project scope had been reduced from a more expansive complex to only Building 15 of the original design. This firm had almost completed working drawings in 1994 when the project was put on hold.

The scope of the project did not have the traditional components of a new project and, therefore, CSU’s standard design fee schedule did not apply. Extra Service (ES) No. 7 amended the original agreement and provided for fee authorization to isolate Building 15 from the original Academic Complex design and issued new Bid Phase and Construction Administration phases. Due to revisions to the original plan, numerous extra services were authorized.

While we understand that it is the normal practice for CPD&C to retain 10% of project fees until all as-built drawings are received, KPMG did not find a billing phase established for this retainage.

We performed a comprehensive review of 94 invoices. Although invoices were thoroughly checked, we had difficulty in reconciling total invoices processed to the accounting records furnished by the accounting department (Chancellor’s office.) This task was additionally complicated by the fact that the majority of the base agreement invoices had been paid from 1992 through 1994 and those invoices were not retained in the current files for SM-460. However, we were able to identify some contractual payments from the CSU accounting department spreadsheet. Those payments are indicated as 1992 – 1994 payments in the analysis below.

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

The CPM report that tracked the original A/E contract and extra services was incorrect. It listed only four of the 23 extra services and did not provide any useful purpose in our review.

**Agreement/Payment Analysis:**

| Source        | Date | Description | Commitment | Amt Paid  | Over/(Under) | Comments                           |
|---------------|------|-------------|------------|-----------|--------------|------------------------------------|
| Schematic     |      |             | 331,004    | 331,004   | 0            | Payments made in 1992 & 1993       |
| Preliminary   |      |             | 243,898    | 243,718   | (180)        | Payments made in 1992 & 1993       |
| CD Phase      |      |             | 665,318    | 636,134   | (29,184)     | Payments made in 1993 & 1994       |
| Bidding       |      |             | 70,033     | 70,033    | 0            | Payments made in 1993 & 1994       |
| CA            |      |             | 431,873    | -         | (431,873)    | Not performed in original contract |
| Base Contract |      |             | 1,742,125  | 1,280,889 | (461,236)    |                                    |

| Source             | Date      | Description        | Commitment | Amt Paid  | Over/(Under) | Comments                        |
|--------------------|-----------|--------------------|------------|-----------|--------------|---------------------------------|
| ESA #2             | 1/14/1993 | Comm. Consult.     | 31,000     | 31,000    |              | Payments made in 1993           |
| ESA #3             | 1/20/1993 | Fine Art lab       | 52,700     | 52,700    |              | Payments made in 1993           |
| ESA #4             | 7/7/1993  | Vibration Contr.   | 8,000      | -         | (8,000)      | Not provided invoices           |
| ESA #5             | 12/7/1993 | Constructability   | 51,150     | -         | (51,150)     | Not provided invoices           |
| ESA #6             | 1/4/1994  | Lab Change         | 12,500     | -         | (12,500)     | Not provided invoices           |
| ESA #7             | 1/4/1994  | Telecom. Wiring    | 12,650     | 3,163     | (9,488)      | Not provided all invoices       |
| ESA #7             | 3/10/1995 | New Design         | 113,000    | 113,244   | 244          |                                 |
| ESA #8             | 9/1/1996  | Design Modif.      | 46,500     | 47,930    | 1,430        |                                 |
| ESA #9             | 9/4/1996  | Ext. Tunnel        | 9,775      | 10,621    | 846          |                                 |
| ESA #10            | 12/2/1996 | Design Modif.      | 6,210      | 11,285    | 5,075        |                                 |
| ESA #11            | 12/2/1996 | Design Modif.      | 2,875      | -         | (2,875)      |                                 |
| ESA #12            | 4/14/1997 | Elevator           | 9,470      | -         | (9,470)      |                                 |
| ESA #13            | 5/21/1997 | C.P. 2             | 1,800      | -         | (1,800)      |                                 |
| ESA #14            | 7/17/1997 | C.P. 22,23,25,26   | 19,100     | 19,100    | -            |                                 |
| ESA #15            | 10/7/1997 | C.P. 28-31,34,35   | 26,200     | 4,000     | (22,200)     |                                 |
| ESA #16            | 10/9/1997 | C.P. 33R           | 2,400      | 2,400     | -            |                                 |
| ESA #17            | 10/6/1997 | C.P. 31R           | 4,200      | 4,200     | -            |                                 |
| ESA #18            | 2/18/1998 | Utility tunnel con | 21,600     | 7,421     | (14,180)     |                                 |
| ESA #19            | 2/9/1999  | Field Rep          | 4,800      | 5,600     | 800          |                                 |
| ESA #20            | See Note  | C.P. 6             |            | 1,350     | 1,350        | Amounts picked up from invoices |
| ESA #21            | See Note  | C.P. 30            | 4,200      | 4,200     | -            | Amounts picked up from invoices |
| ESA #22            | See Note  | C.P. 35            | 10,000     | 4,000     | (6,000)      | Amounts picked up from invoices |
| ESA #23            | See Note  | C.P. 40            | 2,960      | 2,960     | -            | Amounts picked up from invoices |
| Extra Services     |           |                    | 485,990    | 358,077   | (127,913)    |                                 |
| Total A/E Contract |           |                    | 2,228,115  | 1,638,966 | (589,149)    |                                 |

In addition to preparing an analysis of paid invoices by base contract phase and extra service, we attempted to determine the total amount paid to the Architect. As noted in our previous review of the Humboldt project, existing CSU reporting systems were obscure and difficult to read. The reports did not provide an adequate reference to determine how much has been billed on certain phases or extra services. We could not determine with certainty how much had been paid on the overall contract. Although this report may serve to indicate if a total contract is exceeded, it cannot be used as reference tool when approving interim invoices.

***Recommendations:***

5. Standard Architect agreements should be formally amended to include a provision for adequate retainage that would be payable upon receipt of the issuance of record (as-built) drawings.
6. See Recommendation 3 above.

***Management's Response:***

5. We agree, and we will make the change by November 30, 2000.
6. We agree. We will either make modifications to CPM or make a decision to implement an alternate cost tracking system by November 30, 2000. Most campuses are using alternate systems of tracking project costs.

**PROJECT MANAGEMENT SERVICES**

TSC Consultants, LLC (PM) and Wyman Testing Laboratories performed general on-site inspection services, testing and limited project management services for this project.

Three competitive proposals for inspection and testing services were solicited and two proposals were received. The inspector (TSC Consultants) had been hired through Wyman Testing Laboratories in the beginning of the project. Due to a request by TSC, CSU engaged TSC directly and terminated the agreement with Wyman. There were no monthly project management reports provided on the project. Total fees for inspection services covered under both Wyman and TSC agreements represented 1.28% of the total construction costs. This amount consistent with the diminished services provided on the project, is well below the industry standard of 2.5% to 3.5% for project management services. The table below places the project PM fees in the context of other projects reviewed as part of our CSU construction assurance work.

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

| 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%        |                       |
| 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%        | (Pre Completion)      |
| SM-460        | 12,534,361         | 160,643          | 1.28%        | (Diminished Services) |
| LB438         |                    |                  |              | (Not Evaluated)       |
| <b>Totals</b> | <b>232,433,845</b> | <b>5,968,489</b> | <b>2.57%</b> |                       |

The original inspection and testing agreement with Wyman was executed on January 9, 1997, in the amount of \$170,000, plus expenses of \$500. This agreement covered approximately 18 months from January 6, 1997 through June 30, 1998. Amendment 2, issued August 11, 1997, terminated the agreement and provided for a \$50,000 credit.

The construction inspection agreement with TSC was executed on June 16, 1997, in the amount of \$80,000, plus expenses of \$200. This agreement covered 14 months; July 1, 1997, through August 31, 1998. The terms of the agreement indicated that this fee would cover full time services at \$44.50 per hour. At 173.33 work hours per month (an average 40-hour week), this would have equated to approximately \$108,000. Amendment 1, in the amount of \$30,000, extended the service term by 30 days. At 173.33 work hours per month, this would have equated to approximately \$7,700. Amendment 2 extended the term another 30 days for the amount of \$3,000. We found no rationale as presented in the amendments for the lump sum payments, which appear to be substantially in excess of the hourly rate quoted in the base contract.

**Agreement/Payment Analysis:**

The tables below summarize the total encumbrances and costs for project inspection services:

**Wyman Testing Laboratories**

| Source                    | Period             | Inspector | Testing    | Expenses | Total     |
|---------------------------|--------------------|-----------|------------|----------|-----------|
| Original Agreement 1/9/97 | 1/15/97 – 6/30/98  | \$142,708 | \$27,292   | \$500    | \$170,500 |
| Amendment No. 1           | 9 days beg. 1/6/97 | -         | -          | -        | -         |
| Amendment No. 2           | Termination        | -50,000   |            |          | (50,000)  |
| Total Agreement           |                    | \$92,708  | \$27,292   | \$500    | \$120,500 |
| Costs                     |                    | \$50,851  | \$57,362   | \$0      | \$108,213 |
| Over (Under)              |                    | \$41,857  | (\$30,070) | \$500    | \$12,287  |

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

---

**TSC Consultants, LLC**

| <b>Source</b>              | <b>Period</b>       | <b>Inspector</b> | <b>Expenses</b> |
|----------------------------|---------------------|------------------|-----------------|
| Original Agreement 6/16/97 | 7/1/97 – 8/31/98    | \$80,000         | \$200           |
| Amendment No. 1            | 30 days to 9/30/98  | 30,000           |                 |
| Amendment No. 2            | 30 days to 10/30/98 | 3,000            |                 |
| Total Agreement            |                     | \$113,000        | \$200           |
| Costs                      |                     | \$109,792        | \$255           |
| Over (Under)               |                     | (\$3,208)        | \$55            |

***Recommendations:***

7. Construction management reports should be produced and reviewed on a regular basis in order to monitor construction budget contingencies.
8. Service agreements should include specific data that relate the costs to the hourly charges identified in the PM proposals and the agreement or justification for the overall authorizations.

***Management's Response:***

7. We agree, however adequate reports are the responsibility of the Construction Administrator per existing procedures. If reports are not required by the services provider, then the Construction Administrator shall produce the reports. This happens when a Project Manager is not used or is not retained until completion of a project. We will add requirements to SUAM by November 30, 2000, to strengthen the requirement that adequate records or reports must be maintained by the project management team.
8. We agree that specific services should have established unit costs, and service agreements should be amended as appropriate. 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.

**LIQUIDATED DAMAGES**

The original contractual completion date was extended by 183 days beyond the original completion date, which revised the completion date to December 24, 1998. Actual completion indicated on the Notice of Completion was January 4, 1999. We found no record that liquidated damages were assessed for the 11-day shortfall. If assessed, this would have amounted to a \$22,000 charge to the Contractor.

The final Change Order that provided the 76-day extension did not include a comprehensive calculation assessing damages nor an indication as to the reason for waiving the damages. Together with the 11 day shortfall noted in the paragraph above

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

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the amount of *de facto* waiver of liquidated damages was \$174,000 ((76 days+11 days)\*\$2000/day).

The following change orders added time extensions:

| <b>C.O. #</b> | <b>Description of Change</b>                            | <b>Days Added</b> |
|---------------|---|-------------------|
| 37            | Impact and delays - non-compensatory                    | 21                |
| 42            | February and March precipitation – non-compensatory     | 16                |
| 47            | Weather related delays – non-compensatory               | 5                 |
| 50            | Two month extended general conditions - \$26,750        | 65                |
| 51            | Occupancy of interior and central plaza August 20, 1998 | 0                 |
| 73            | "Global Settlement" - \$14,149                          | 76                |
|               | Total days added  | 183               |

***Recommendations:***

9. CPD&C should make every attempt to address interim construction time extensions at the time of the delay to reduce the number of contractor claims at the end of projects and maintain better positions in assessing liquidated damages. Although we recognize the importance of keeping projects on schedule, when substantive delays occur due to unanticipated conditions, CSU should negotiate time extensions. This approach creates a cooperative spirit and reduces final "settlement" change orders, contractor claims and trade-offs.

***Management's Response:***

9. 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 February 8-9, 2000. Although requested, submittal documentation was not available at the time of the initial office visit to the contractor, Swinerton & Walberg Construction, on March 29, 2000. Copies of submittal records provided to the campus were reviewed at the Facilities Service office at the San Marcos campus visit on March 29, 2000. The following specification sections were reviewed:

|          |       |   |
|----------|-------|---|
| Division | 14212 | Hydraulic elevator                      |
| Division | 15171 | Variable frequency drives               |
| Division | 15440 | Plumbing fixtures - ur 1 / flush valves |
| Division | 15440 | Plumbing fixtures - water closet/valve  |

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

|          |       |  |
|----------|-------|--|
| Division | 15450 | Plumbing equipment - hot water heater  |
| Division | 15512 | Hydronic valves – butterfly            |
| Division | 15512 | Hydronic valves – gate                 |
| Division | 15512 | Hydronic valves – globe                |
| Division | 15540 | HVAC pumps (horizontal split case)     |
| Division | 15855 | Air Handling Units                     |
| Division | 15885 | Air filtration - panel filters         |
| Division | 16140 | Devices - occupancy sensors            |
| Division | 16200 | Stand-by power plant set - (engine)    |
| Division | 16200 | Stand-by power plant set - (generator) |
| Division | 16200 | Stand-by power plant set - (governors) |
| Division | 16500 | Lighting fixtures - recessed 2 x 2     |

Swinerton & Walberg did not have requested submittal documentation available for our review. Fortunately, the campus retained submittal files secured by the PM firm and we found this information sufficient for the review.

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 March 29, 2000, with representatives from campus personnel and the consulting PM 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. In addition, the Contractor provided signed forms (CSU's Guarantee Quality and Performance form) that each subcontractor guarantees all work was installed in accordance with the Plans and Specifications.

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

| Div. Section | Equipment Description                 | Specified/ Approved Manufacturers | Submitted Model        |
|--------------|---------------------------------------|-----------------------------------|------------------------|
| 14212        | Hydraulic Elevator                    | US Elevator Co.                   | MP-1230                |
| 15171        | Variable Frequency Drives             | ABB                               | ACH 500                |
| 15440        | Plumbing Fixtures – Water Closet (WC) | American Standard                 | Afwal Aquameter EL 1.6 |
|              | Plumbing Fixtures – WC Valve          | Sloan                             | Sloan III              |
|              | Plumbing Fixtures – UR1               | American Standard                 | Allbrook 1.0           |
|              | Plumbing Fixtures – UR 1 Flush Valves | Sloan                             | Sloan 186-1            |
| 15450        | Plumbing Equipment - Hot Water Heater | Lochinvar                         | HXC12-082              |
| 15512        | Hydronic Valves – Gate                | Watts < or = 2 inches             | B-3110                 |
|              | Hydronic Valves – Gate                | Watts > or = 2.5 inches           | F-503                  |
|              | Hydronic Valves – Globe               | Watts < or = 2 inches             | B-4010-T               |
|              | Hydronic Valves - Globe               | Watts > or = 2.5 inches           | F-501                  |
|              | Hydronic Valves - Butterfly           | Full Lug – Watts                  | BF-03-M2               |
|              |                                       | Wafer – Watts                     | BF-04-M2               |
| 15540        | HVAC Pumps (Horizontal Split Case)    | Pacific Pumping Co. (PACO)        | 11-30121               |
| 15855        | Air Handling Units                    | Governair                         | 73-69582-7 (RI)        |
| 15885        | Air Filtration - Panel Filters        | American Air Filter               | AM AIR                 |
| 16140        | Devices - Occupancy Sensors           | Lightolier                        | OS-C                   |
| 16200        | Stand-By Power Plant Set - (Engine)   | John Deere                        | DMT200-JD              |

**KPMG Construction Cost Review**  
**CSU - San Marcos Academic II - Building 15**  
**SM-460**

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|       |  |                |                       |
|-------|--|----------------|-----------------------|
|       | Stand-By Power Plant Set - (Generator) | Waukesha       | DMT200-JD             |
|       | Stand-By Power Plant Set - (Governors) | Barber Coleman | DYN1-10704-000-0-12   |
| 16500 | Lighting Fixtures - Recessed 2 x 2     | Lightolier     | DPS 2G9 LP 2U4 120SB  |
|       | Lighting Fixtures - Recessed 2 x 4     | Lightolier     | DPS 2G18 LP 340 120O3 |

***Recommendations:***

10. The University should require that a final and accurate Submittal Log is included as part of the closeout documentation for record retention.

***Management's Response:***

10. We agree. Recommended procedures were added to the Project Administrative Reference Manual in December 1999.

**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.

***Recommendations:***

None

# Memorandum

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

**Date:** July 5, 2000  
**Revised August 1, 2000**

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

**RECEIVED**  
University Auditor

AUG 03 2000

**Subject:** **Audit Report**  
Academic II-Building 15, SM-460  
California State University, San Marcos

**The California State  
University**

I am pleased that the overall theme of the 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.

### Contractor Compliance – Subcontracting Practices

#### Recommendations:

1. We have requested additional information from the Contractor. They provided an executed copy of the subcontract agreement between Swinerton & Walberg, and Classic Tile, the subcontractor. The value of the agreement was \$55,800, which was less than ½ percent of the initial contract bid and was for subcontractor installation work. They have explained that they also issued a separate purchase agreement for materials only, also with Classic Tile in the amount of \$63,200. This appears to explain the audit findings.
2. We agree. Procedures to monitor use of subcontractors have been implemented, and the Contract General Conditions revised January 2000 now provide a subcontractor status report from the General Contractor. **We are satisfied with the Contractor's explanations on this project (a copy of the Contractor's explanations was acknowledged in your report), and find no penalties required.**

### Construction Change Orders

#### Recommendations:

3. We agree. We will either make modifications to CPM or make a decision to implement an alternate cost tracking system by November 30, 2000. Most campuses are using alternate systems of tracking project costs.

4. We agree. The contractor agrees to reimburse the duplicated item.
5. We agree, and we will make the change by November 30, 2000.
6. We agree. We will either make modifications to CPM or make a decision to implement an alternate cost tracking system by November 30, 2000. Most campuses are using alternate systems of tracking project costs.

Project Management Services

Recommendations:

7. We agree, however adequate reports are the responsibility of the Construction Administrator **per existing procedures**. If reports are not required by the services provider, then the Construction Administrator shall produce the reports. This happens when a Project Manager is not used or is not retained until completion of a project. **We will add requirements to SUAM by November 30, 2000, to strengthen the requirement that adequate records or reports must be maintained by the project management team.**
8. We agree that specific services should have established unit costs, and service agreements should be amended as appropriate. 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.

Liquidated Damages

Recommendations:

9. 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

Recommendations:

10. We agree. Recommended procedures were added to the Project Administrative Reference Manual in December 1999.

JRC:su

cc: Mr. J. Patrick Drohan

THE CALIFORNIA STATE UNIVERSITY  
OFFICE OF THE CHANCELLOR

BAKERSFIELD

CHANNEL ISLANDS

August 15, 2000

CHICO

DOMINGUEZ HILLS

MEMORANDUM

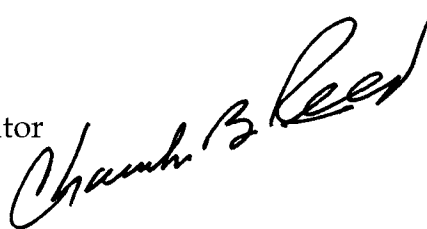
FRESNO

TO: Larry Mandel  
University Auditor

FULLERTON

HAYWARD

FROM: Charles B. Reed



HUMBOLDT

SUBJECT: KPMG Peat Marwick Draft Final Report on the *Academic II-Building 15 Project* at California State University, San Marcos

LONG BEACH

LOS ANGELES

MARITIME ACADEMY

In response to your memorandum of August 15, 2000, I accept the response as submitted with the draft final report on the *Academic II-Building 15 Project*, California State University, San Marcos.

MONTEREY BAY

NORTHRIDGE

CBR/cw

POMONA

Enclosure

SACRAMENTO

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