

SAN DIEGO STATE UNIVERSITY
RESIDENTIAL SUITES & RESIDENTIAL DINING COMPLEX

Final Report

July 8, 2002

**KPMG Construction Cost Review
San Diego State University
Residential Suites & Residential Dining Complex
002-99**

PROJECT OVERVIEW

KPMG was retained by the California State University's (CSU) Office of the University Auditor to perform a review of the San Diego State University's (SDSU or the University) Residential Suites & Dining Complex (RSRD). The project was constructed to address the University's need to meet student market demand for suite style housing, to provide residential dining for the resident student population, and to respond to the goals of the University's Master Plan by centralizing residential facilities on the east side of the campus. The project was designed in the SDSU mission revival style and included a number of site amenities such as a swimming pool, barbecue area, recreational lawn, and a "commons" area.

The project consists of two, six-story, residential suite buildings totaling approximately 200,000 square feet, and a two-story building with a basement and a dining facility of approximately 42,000 square feet. The complex is located on a three-acre site and provides 698 beds, the majority of which are in eight-person suites, organized around an "L" shaped double loaded corridor. Each floor contains a lounge and elevator lobby with two elevators serving each building. Vertical circulation and exiting is accomplished via three stair shafts in each building.

The dining commons building is centrally located on the project site. The first floor contains mostly housing related functions, such as: a central control desk, mail service, offices, central laundry, and seminar rooms. The first floor also contains a coffee shop and restroom facility to serve the second floor dining area. The second floor contains a "Market Place" dining concept, which includes the kitchen, preparation and clean-up area, and exterior balcony dining areas. Two elevators and three stair shafts provide vertical circulation. The basement contains the mechanical equipment, employee locker rooms, storage, an electrical room, dock office and is serviced by a loading dock.

The RSRD project was constructed under the management of San Diego State University's Facilities Planning and Management (FPM) Department and was developed utilizing a design-build project delivery process. The design-build delivery approach is discussed in detail in the next section of this report.

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

Contractor:	Douglas E. Barnhart, Inc. (Barnhart)
Project Management (PM):	O'Connor Management (OCM)
San Diego State University	Facilities Planning & Management (FPM)
Executive Architect	Delawie Wilkes Rodrigues Barker & Bretton Associates, AIA (DWRBB)

DESIGN-BUILD PROCESS

This is the second design-build project reviewed within the CSU construction audit program. Because the approach changes the parameters of our established review approach, we believe that the University may find it useful to discuss the fundamental differences in capital project delivery between design-build and CSU's traditional bid approach.

The design-build approach more appropriately fits specific project types. Housing is a good example for this type of project delivery method. Design-build worked on this particular project because SDSU had experience with this process and was able to put effort in detailed design development. Additionally, by bringing the Contractor into the process early, SDSU was able to guarantee the Contractor's pricing rather than waiting until all construction documents were ready for a typical "hard bid." The construction delivery process made occupancy possible prior to the Fall 2001 semester, which was critical to the University.

CSU's Traditional Project Delivery System

Under the traditional system, CSU contracts directly and separately with the designer and contractor. Project delivery proceeds in a linear fashion, with the design being completed before construction is bid. The design firm functions as the Owner's agent during construction - in theory, providing the Owner with dual safeguards - guarding the Owner against defects in the work and acting as arbiter of disputes between the Owner and the contractor which, by their nature, affect the progress of the work. The Owner retains decision making authority for the selection of materials and coordinates design with construction. The contractor performs and supervises construction.

Design-Build Project Delivery System

Under the design-build system, CSU contracts directly with a single design-builder who has full responsibility for developing a design that meets CSU's performance expectations as well as implementing that design. The design-builder is also responsible for the selection of materials which meet CSU's program needs and coordinating the activities required to produce the project within the project's budget. In theory, Owners will realize cost benefits with design-build approaches by converting the project coordination function from a cost management item controlled by the Owner to a profit management incentive for the design-builder. This project incurred lower overall project management costs as compared with traditionally constructed projects. To fully realize the benefits of this approach, clear specifications of Owner performance requirements and high quality inspection of work in progress are required.

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An additional cost benefit of the design-build approach is limited error and omission (E/O) change orders. In our analysis of projects reviewed for the last two years and two projects completed this year, we found the following averages for E/O changes:

Project	Campus	Review Yr.	E/O Changes	% of Contract
SM 460	San Marcos	99-00	\$254,238	2.27%
SJ 534	San Jose	99-00	287,171	1.55%
SJ 200	Monterey	99-00	\$189,926	1.55%
HU 437	Humboldt	99-00	\$349,892	4.17%
HA 434	Hayward	99-00	\$427,101	5.85%
CI 604	Channel Islands	99-00	\$802,895	12.70%
PO 261	Pomona	00-01	\$624,504	2.66%
LA 443	Los Angeles	00-01	\$1,581,065	7.24%
SL 98-500	San Luis Obispo	00-01	\$73,834	2.58%
SL 98-500	San Luis Obispo	00-01	\$26,435	5.47%
SL 98-500	San Luis Obispo	00-01	\$13,104	1.10%
SSA 448	Sacramento	00-01	\$46,663	0.40%
SSU 1878	Sonoma	00-01	\$780,574	2.49%
SFSU - Chavez	San Francisco	01-02	\$1,609,606	15.57%
SB W007002	San Bernardino	01-02	\$0	0.00%
Average				4.37%

If the RSRD project had incurred the average of 4.37% for E/O changes, project costs would have increased by an additional \$1,365,290.

Pursuant to Public Contract Code Section 10708, SDSU has the authority to administer design-build construction projects. This section of the code gives CSU latitude in the development of the design-build project delivery approach and anticipates that the California Legislature will continue to develop guidelines for this delivery process. The code currently states:

When, in the opinion of the trustees, the best interests of the California State University dictate, the trustees may enter into an agreement with a contractor to provide all or significant portions of the design services and construction of a project under this chapter. The contractor shall design the project pursuant to the scope of services set forth in the request for proposals, build the project, and present the completed project to the trustees for their approval and acceptance. Work under this section shall be carried out by a contractor chosen by a competitive bidding process that employs selection criteria in addition to cost. Any design work performed pursuant to this section shall be prepared and signed by an

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architect certificated pursuant to Chapter 3 (commencing with Section 5500) of Division 3 of the Business and Professions Code.

As a result of last year's review of a SDSU project, CPDC in the Chancellor's Office amended the Design-Build General Conditions to include provisions for Errors and Omissions Insurance. However, the current general conditions continue to delineate "contractor" and "architect" responsibilities. In standard design-build environments, all services are provided under the responsibility of the "design-builder."

Recommendation:

1. CPDC (Chancellor's Office) should review and amend documents and guidelines in order to ensure that CSU interests are contractually protected in design-build construction delivery processes and that documents more appropriately fit the process.

Management Response:

1. With the update to the Design/Build Contract General Conditions in April, 2002, CPDC removed the delineation of Contractor vs. Architect responsibilities. CPDC further defined the "Design-Builder" as the entity that contracts with the Trustees, and the "Architect" as "a California-licensed architect, employed by the Design-Builder..."

In so doing, CPDC has made it clear that the design-builder is under contract with the Trustees to design and construct the project. And the architect is under contract to the design-builder, not the Trustees.

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REQUEST FOR PROPOSAL PROCESS

The RFP was prepared in accordance with policies in effect at the time of bid. Section 24 of the current CSU Design-Build Guidelines provides a sample point system for evaluation purposes. Without identifying the submitting firms, the first step of the bid opening is to post the total points awarded for expertise by the selection committee. The second step is to open the sealed cost proposals. The final step is the computation of each proposal's cost/unit quality, arrived at by dividing the bid price by the total points scored. The cost/unit quality formula determined the apparent finalist and the second, third, fourth, and fifth place awards.

The SDSU evaluation committee was comprised of CSU Facilities Management staff, the Executive Architect, a structural consultant, the Director of the SDSU Aztec Shops (dining management), Chancellor's Office and the Director of SDSU Housing. The estimated project cost was \$32,000,000. Five responses were evaluated based on criteria established in the RFP that awarded points for the following six categories:

SDSU Residential Housing and Dining Complex	Maximum Quality Points	Multiplier	Possible Score
CRITERIA			
Quality enhancements to design criteria and project concept	10	5	50
Quality/value of structural and building systems, materials, and products	10	5	50
Enhancement of the RFP design bed space capacity and dining seating capacity	10	5	50
Enhancement of overall design excellence, efficient site utilization and conformance with campus architectural character, landscaping, and detailing	10	4	40
Consideration of operational and maintenance factors and energy efficiency	10	3	30
Design, construction and completion schedule	10	2	20
Total Points			240

Submissions were scored by the evaluation team without knowledge of the identity of the bidders. Total points were divided into the cost estimates presented by the bidders. The lowest cost to quality point ratio was considered the low bid. Douglas E. Barnhart, Inc. was issued a construction contract in the amount of \$31,974,006 on November 17, 1999. We believe this approach to be a reasonable practice for contractor selection.

Chapter II – Model RFP (for design-build projects), section 21.07 includes the provision to make cash awards to help defray bidders' cost of proposing in an effort to obtain competitive responsive bids. SDSU awarded the unsuccessful bidders reimbursement for their time, effort, and proposal costs. KMPG finds this practice common amongst our private sector clients. The following awards were paid:

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PLACE	BIDDER	AWARD
2nd place finalist	C. F. Jordan Commercial LP	\$ 10,000
3rd place finalist	Soltek Pacific	7,000
4th place finalist	Taylor Ball of CA	5,000
5th place finalist	Nielsen Dillingham Construction Co.	3,000

Recommendation:

None

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BID PROCESS

Prior to the deadline for the Request for Proposals (RFP), four Addendum were issued:

- *Addendum #1* provided drawing clarifications and additional specification sections.
- *Addendum #2* changed various specification sections, provided additional drawings, and issued the University's response to pre-proposal conference questions.
- *Addendum #3* issued additional drawings and clarified various specification sections.
- *Addendum #4* included a list of revisions, responses to Requests for Information, partial drawing sheets, and a \$15,000 allowance for gas connection fees and San Diego Gas and Electric's scope of work.

In conjunction with various consultants and the University, Delawie Wilkes Rodrigues Barker & Bretton Associates, AIA (DWRBB), the Executive Architect for the University, estimated the project to cost \$32,000,000. The original RFP indicated a deadline of September 8, 1999. The Abstract of Bids listed the five (5) responsive proposers, the lowest of which was Douglas E. Barnhart, Inc. with a base bid in the amount of \$31,457,809. The original Cost Proposal included a fixed amount of \$500,000 for the design-builder's design, plans, specifications, and plan check services. The initial specifications listed three (3) additive alternates. The alternates were as follows:

- Alternate 1:* \$301,332 - Provide swimming pool, pool deck, fending and equipment.
- Alternate 2:* \$42,918 - Provide restrooms/showers at first floor of Building A.
- Alternate 3:* \$171,947 - Provide one (1) additional sink in each resident suite restroom.

All of the Alternates were incorporated into the original construction contract. Douglas E. Barnhart was awarded the construction contract in the amount of \$31,974,006 on November 17, 1999. The original contract included six allowances that are further discussed in following sections of this report.

Additional findings relating to the project include:

- The Abstract of Bids was appropriately completed and signed.
- Douglas E. Barnhart, Inc. furnished an appropriate Payment and Performance Bond in the original contract amount as required.
- Douglas E. Barnhart, Inc. is a California Corporation.
- The original construction period was to cover 600 calendar days.

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- Liquidated damages were stated to be \$3,000 per day for the first 30 days after the established completion date and \$7,000 per day for delays beyond 31 days.
- A Notice to Proceed for Phase I, design phase, could not be located in the project files. SDSU has since implemented a project checklist that should ensure that appropriate documents are executed.
- Notice to Proceed for Phase II, construction, was given on February 7, 2000, with a start date of no later than February 21, 2000, a construction period of 480 days, and a final completion date of July 27, 2001.
- Occupancy of Building B – East occurred on July 16, 2001, and occupancy of Building A and Building B – West occurred on July 23, 2001.
- Notice of Completion for the entire project was recorded as October 10, 2001.
- The University took beneficial occupancy prior to the contractual completion date and therefore no extensions were granted.

Recommendation:

None

CONTRACTOR COMPLIANCE - SUBCONTRACTING PRACTICES

For this project, the "List of Proposed Subcontractors" (CM Form 701.04) identified 26 work divisions and subcontractors. The "Expanded List of Subcontractors" (CM Form 701.04 A) included numerous other subcontractors although, since the subcontract amounts were less than ½ of 1%, listing was not required.

As part of the bid process review, Barnhart provided the original bid files and all relevant documentation. We reviewed the entire bid file and determined that Barnhart received multiple bids for most trades. KPMG found the bid practice employed on the Residential Suites & Residential Dining Complex both reasonable and within industry standards. We examined the following trade bids in detail:

- **Roofing:** Three bids were received ranging from \$206,000 to \$217,850. The second bidder was awarded a subcontract in the amount of \$208,000.
- **Window Coverings:** Barnhart received four bids ranging from \$26,895 to \$38,450. The Contractor did not accept the low bid as responsive. Barnhart executed a subcontract based on the middle bid in the amount of \$36,345.
- **Glass/Glazing/Doors/Frames:** Four bids were received ranging from \$721,502 to \$763,240. Barnhart awarded added security screens to the second low bid and issued Tower Glass a subcontract in the amount of \$834,000.
- **Building Insulation:** The Contractor received two bids in the amounts of \$156,500 and 189,440. Barnhart deducted some options offered from the low bid and awarded Spring Valley Insulation a subcontract in the amount of \$125,700.

Recommendation:

None

CONSTRUCTION CHANGE ORDERS

Thirty-one change orders totaling \$1,629,854 and incorporating over 150 Change Order Requests (COR) were approved on the project. These changes added 5.1% to the original contract amount of \$31,974,006. After award of the design-build contract, the University determined that an auxiliary campus group, Aztec Shops, would manage the dining facilities. As a result, numerous design and equipment changes were approved. Additionally, there was approximately \$80,000 in change order costs to accommodate the San Diego trolley being constructed through the campus. The Metropolitan Transit Development Board subsequently reimbursed these costs. The following is an analysis of the total changes approved on the project:

Changes Generated By	Total	% of Total CO
Project Team	881,414	54.08%
Trolley	80,333	4.93%
Student Housing	320,181	19.64%
Aztec Shops	347,926	21.35%
Total	1,629,854	100.00%

The University incurred \$138,164 in additional change order costs for design changes incorporated into Barnhart's contract. Including Contractor mark-up, the charges totaled more than \$158,000. The Architect of Record, under the supervision of Barnhart, charged labor costs at two and one-half times their direct personnel expense rather than actual labor and burden costs as required for other subcontractors. The CSU Design-Build guidelines do not address the proper method for the calculation of additional design costs for the Design-Build contract.

Recommendation:

2. CPDC (Chancellor's Office) should address the issue of additional design fee reimbursement on change orders in the Design-Build General Conditions. Specifically, the General Conditions should clarify whether or not the Architect of Record is treated as a subcontract to the general contractor.

Management Response:

2. The "Architect" is defined in the Contract General Conditions, Article 31.00, as "a California-licensed architect, employed by the Design-Builder, who is responsible for all engineering and architectural services to be performed in connection with the project."

When pricing services performed on changes, the University shall follow the methodology outlined in the standard Architect/Engineer agreement. That is Article IV.2, see the following:

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EXTRA SERVICES

For the Architect/Engineer's Extra Services, the fee to be paid shall be determined in one of the following manners and identified as a part of the extra service authorization.

- A. At their discretion, the Trustees may elect to negotiate a fixed fee for extra services.
- B. For work performed by principals and employees of the Architect/Engineer the Architect/Engineer shall receive an amount not to exceed two and one half (2.50) times the Direct Payroll Costs for Services of Principals and/or Employees for actual time expended to provide the authorized extra services. Reimbursement for principals for providing drafting or other related services normally provided by an employee shall be reimbursed at the maximum rate for services of employees. The Architect/Engineer shall provide a rate sheet at the onset of the project listing rates applicable to this project within the limits listed above.
- C. For work performed by firms or individuals not employees of the Architect/Engineer, but engaged by the Architect/Engineer to assist in providing the authorized extra service, the Architect/Engineer shall receive one and one tenth (1.10) times the amount to be paid by the Architect/Engineer to the consultants for said services. Payment to consultants for services rendered is limited to direct project costs, including a maximum of two and one half (2.50) times the Direct Payroll Costs for Services of Principals and/or Employees for actual time expended to provide the authorized extra service.

CPDC staff have incorporated these requirements into a Supplementary General Conditions to the Design/Build Contract General Conditions, and these have been posted on the internet (www.calstate.edu/cpdc), for use by the campuses.

Review of Contractor Documentation

As part of our review process, we sampled change orders and traced subcontractor estimates to the actual subcontractor change orders. The Contractor furnished all subcontract files. KPMG reviewed over two hundred change order requests from approximately forty different subcontractors. We were able to trace all significant subcontractor quotes/backup on change orders issued to the applicable subcontracts.

The following six allowances were included in the contract amount and were appropriately adjusted as shown in the following table:

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Allowance Description	Amount	CO #	Final Adjustment
\$100 per keyed door opening	72,700	21	(72,700)
Interface/coordination w/University Plant	20,000	3	(20,000)
Signage	50,000	17	(50,000)
Monument sign	20,000	27	(8,540)
Water and sewer utility connection fees	550,000	17	(204,504)
Gas connection fees	15,000	26	(8,540)
Total	727,700		(364,284)

Recommendation:

None

Change Order Markup

The General Conditions for this project allowed the following markup for overhead and profit as follows:

- 15% on the first \$50,000 of the General Contractor's self performed work
- 10% on the General Contractor's self performed work over \$50,000
- 10% on the first \$50,000 of direct costs for subcontracted work
- 7% on direct costs for subcontracted work in excess of \$50,000
- 6% credit fee on deductive changes

The markup for overhead and profit specifically covers specific cost items identified in the CSU general conditions. In a review of contractor and subcontractor markups with respect to change orders, we found that various subcontractors repeatedly charged disallowed cost items that should have been included in the provisions for overhead and profit. The University, in conjunction with their outsourced project management firm, attempted to recover the overcharges.

The current SUAM now provides contractor and subcontractor pricing forms that should eliminate these miscellaneous costs on future projects. In a detailed analysis, we found that certain overcharges were not recovered. Since SDSU issued and approved a credit change order for these overcharges in the amount of \$14,322. The result of our analysis follows:

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Cost Distribution	Dyna Electric	TB Penick	Iron Horse	Atlas Mech	Brady	Quality Reinfor	Total
Sundries (1%)	1,529						1,529
Sales Tax (7.75%)	118						118
Total Materials	1,647	-	-	-	-	-	1,647
Expendables	289						289
Cartage Handling (4%)	10,722						10,722
Total Expenses	12,658	-	-	-	-	-	12,658
Overhead (15%)	1,899						1,899
Consumables (3%)					816		816
Small Tools (5%)					1,358		1,358
Shop Drawings					1,750		1,750
Field Overhead (3%)				1,402			1,402
Service Reward (2%)				1,044			1,044
Warranty (1%)	6,941			2,510			9,451
Bond		320				18	338
Mark-up on Mark-up			169			277	446
Sub-Total	21,498	320	169	4,956	3,924	295	31,162
Fee					589		589
Subcontract Overcharge	21,498	320	169	4,956	4,513	295	31,751
Douglas E Barnhart Fee	2,150	32	17	496	451	30	3,175
Total Overcharge	23,647	352	186	5,452	4,964	325	34,926
Recovered in CO 29							14,322
Overcharges Unrecovered							20,604

Recommendation:

- The University should pursue recovery of the balance for the subcontractor overcharges in the amount of \$20,604. Further, FPM should specifically direct project management consultants to the appropriate section of the CSU General Conditions to ensure that changes are appropriately reviewed and processed.

Campus Response:

- We concur. The University will attempt to pursue cost recovery with the contractor for subcontractor overcharges. We expect to have a resolution on this issue by January 2003.

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Labor Burden and Fringe

Douglas E. Barnhart provided documentation that supported their labor burden and fringe costs ranging from 34.34% to 43.31%. We found their method for calculations reasonable and within industry standards. No adjustments were warranted. Barnhart's breakdown for labor burden and fringe for four trade labor codes follows:

Trade	Health/ Welfare	Pension	Training	Workman's Comp	Prof Liability	FICA	Medicare Health	FUTA	State Unemp	Total
Carpenter	11.41%	5.00%	1.50%	8.95%	2.60%	6.2%	1.45%	0.80%	5.40%	43.31%
Cement Mason	12.60%	5.00%	1.50%	2.31%	2.60%	6.2%	1.45%	0.80%	5.40%	37.86%
Laborer	13.66%	5.00%	0.00%	3.30%	2.60%	6.2%	1.45%	0.80%	5.40%	38.41%
Engineer	9.41%	5.00%	2.05%	1.43%	2.60%	6.2%	1.45%	0.80%	5.40%	34.34%

Recommendation:

None

Change Order Report Analysis

The University provided a change order log accurately reflecting the source of each of the twenty-nine changes. The 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	30,443	1.87%	0.10%
4.2 Unforeseeable job site conditions	138,146	8.48%	0.43%
4.3 Regulatory agency, bldg. code, safety, health	1,028	0.06%	0.00%
4.4 Originated by the University	1,460,677	89.62%	4.57%
4.5 Unavailability of specified materials	(440)	-0.03%	0.00%
4.6 Other	-	0.00%	0.00%
Total Change Orders	1,629,854	100.00%	5.10%
Original Contract Amount	31,974,006		
Total	33,603,860		

Recommendation:

None

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DESIGN COSTS

The University engaged the services of Delawie Wilkes Rodrigues Barker & Bretton to provide partial preliminary design, full schematic design, and bidding phase consultation. The contract was based on fee guidelines provided by the Chancellor's Office. An Executive Architect Agreement was executed on January 15, 1999, in the amount of \$564,572. The revised agreement totaled \$915,217 including the following additional authorized services:

- No. 1 – Design changes for food service and interior design modifications - \$93,720.
- No. 2 – Office computing support - \$1,295.
- No. 3 – Additional structural and civil engineering services - \$4,000.
- No. 4 – Extra services totaling \$251,630:
 - Adjustments to the preliminary design and bidding phases to correspond to a revised construction budget - \$68,174.
 - Additional construction administration services on a Time and Material (T&M) basis of \$173,606.
 - Extra water service investigation for \$4,850.
 - Reimbursable expenses of \$5,000.

The total paid on the agreement was \$756,400 due to savings on the T & M additional services and reductions in the scope of service required. The University properly liquidated the unused encumbrance. It is now a SUAM requirement that a final amendment is issued to close out the unbilled amounts on architectural agreements.

As is typical for design-build projects, the total design fees paid for the project were less than those normally paid under CSU fee guideline calculations. The following table summarizes those costs:

Design Fees	Amount
DWRBB Schematic	268,172
DWRBB Preliminary	295,131
Bidding Phase	69,443
Construction Administration	14,789
Subtotal Paid by University	647,535
Barnhart Design Fee	885,640
Total Design	1,533,175
Fee amount using CSU Fee Guideline Calculations	1,814,400
Design Cost Savings	281,225
Actual Based on \$32,000,000 estimate	4.79%
Actual Based on CSU Fee Guideline Calculations	5.67%

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Recommendation:

None

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PROJECT MANAGEMENT/INSPECTION SERVICES

SDSU solicited Requests for Qualifications (RFQ) to provide project management and inspector of record (IOR) services. The RFQ included project specific information as well as a request for billing rates and staffing plans, which essentially served as a formal Request for Proposals. Eleven firms submitted responses and three were short-listed to provide project management, inspection, and scheduling analysis and change order review services. O'Connor Construction Management was selected as the most qualified firm and was awarded a service agreement in the amount of \$515,000. Two additional service agreements, totaling \$15,135, were issued:

- Food service consulting - \$3,135.
- Coordination and verification of kitchen equipment utility service requirements and layout - \$12,000.

The University properly processed each invoice. From a conversation with O'Connor's project manager, we learned that schedule updates were performed and charged against the project management service budget and were not separately invoiced. The original agreement identified that an engineer would be brought onto the project as needed and would use remaining funds from other categories to cover costs. The following is an analysis of the agreement and expenditures:

Service Description	Agreement	Paid	Balance
PM Services (Incl. Addt'l Serv. #2)	242,330	249,295	(6,965)
Inspector (IOR)	224,958	211,439	13,519
Change Order Review	25,000	24,999	1
Scheduling	25,500	10,500	15,000
Engineer	listed rate only	21,720	(21,720)
Additional Service #1	3,135	3,135	-
Subtotal	520,923	521,088	(165)
Expenses	9,212	7,053	2,159
Total Agreement	530,135	528,141	1,994

Fees paid for project management and IOR services totaled \$528,141, representing 1.57% of total construction costs. As expected for projects utilizing a design-build approach, this is below industry standards of 2.5% to 3.5% for project management and inspection services.

Recommendation:

None

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ACCOUNTING

KPMG conducted a review of the University's cost accounting reporting system and invoice processing practices. The SDSU Facilities Planning & Management provided an automated report that tracked the RSRD project budget, actual expenditures and contingency.

The reporting system is maintained independently of the accounting and procurement departments, requiring SDSU Facilities Planning & Management to enter all invoice information in spreadsheets - even though the University accounting department also enters all invoices into the central accounting system.

Recommendation:

None

LIQUIDATED DAMAGES

Beneficial occupancy occurred in July 2001, prior to the contractual completion date, which was appropriately documented in change orders. The University allowed additional time for punch list items and close-out documentation until October 2001.

Recommendation:

None

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MAJOR EQUIPMENT REVIEW

The initial review of Contract Documents and Specification was performed at the Contractor's office the week of January 21, 2001. The Contractor furnished a Submittal Log, from which a sample was selected. Submittal records were provided and reviewed at the Contractor's office.

Of the submittals reviewed, all were traced from Project Specifications through submittal data and final acceptance. The equipment specified in Project Specifications was supported with required acceptance documentation. A project walk-through was conducted with representatives from campus personnel in order 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
8330	Atlas	S43	Overhead Coiling Door - Basement
11160	Serco	WS #W8005	Mechanical Leveler @ Loading Dock
13120	PACO	25957	Swimming Pool Circulating Pump
15500	Bell & Gossett	Series 1510	Chilled Water Centrifugal Pump
16310	NEMA Type I	Type HLV, 15 KV	Secondary Unit Substation - Switchgear
16441	Square D	PM 620, Class 3020	Power Logic Power Meter
16441	Square D	CM 2350, Series 2000	Power Logic Circuit Monitor

Recommendation:

None

Memorandum

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

Date: September 23, 2002

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

Subject: **Audit Report**
Residential Suites and Residential Dining Complex
San Diego State University

I am pleased that the overall theme of this audit report continues in a positive vein and that it finds general compliance with established procedures. I have reviewed the report's findings with my Capital Planning, Design and Construction (CPDC) staff, and our specific comments to the auditors' findings and recommendations are on the attached pages, in the format provided on the diskette.

RPW:JPD:bn

Attachment

cc: Mr. J. Patrick Drohan
Mr. James R. Corsar
Mr. Thomas M. Kennedy
Ms. Elvyra F. San Juan

Revised 9/23/02

DESIGN-BUILD PROCESS

Recommendation:

- 1 CPDC (Chancellor's Office) should review and amend documents and guidelines in order to ensure that CSU interests are contractually protected in design-build construction delivery processes and that documents more appropriately fit the process.

CPDC Response:

With the update to the Design/Build Contract General Conditions in April, 2002, CPDC removed the delineation of Contractor vs. Architect responsibilities. CPDC further defined the "Design-Builder" as the entity that contracts with the Trustees, and the "Architect" as "a California-licensed architect, employed by the Design-Builder..."

In so doing, CPDC has made it clear that the design-builder is under contract with the Trustees to design and construct the project. And the architect is under contract to the design-builder, not the Trustees.

CONSTRUCTION CHANGE ORDERS

Recommendation:

2. CPDC (Chancellor's Office) should address the issue of additional design fee reimbursement on change orders in the Design-Build General Conditions. Specifically, the General Conditions should clarify whether or not the Architect of Record is treated as a subcontract to the general contractor.

CPDC Response:

The "Architect" is defined in the Design/Build Contract General Conditions, Article 31.00, as "a California-licensed architect, employed by the Design-Builder, who is responsible for all engineering and architectural services to be performed in connection with the project."

**KPMG Construction Cost Review
San Diego State University
Residential Suites & Residential Dining Complex
002-99**

When pricing services performed on changes, the University shall follow the methodology outlined in the standard Architect/Engineer agreement, Article IV.2, see the following:

EXTRA SERVICES

For the Architect/Engineer's Extra Services, the fee to be paid shall be determined in one of the following manners and identified as a part of the extra service authorization.

- A. At their discretion, the Trustees may elect to negotiate a fixed fee for extra services.
- B. For work performed by principals and employees of the Architect/Engineer the Architect/Engineer shall receive an amount not to exceed two and one half (2.50) times the Direct Payroll Costs for Services of Principals and/or Employees for actual time expended to provide the authorized extra services. Reimbursement for principals for providing drafting or other related services normally provided by an employee shall be reimbursed at the maximum rate for services of employees. The Architect/Engineer shall provide a rate sheet at the onset of the project listing rates applicable to this project within the limits listed above.
- C. For work performed by firms or individuals not employees of the Architect/Engineer, but engaged by the Architect/Engineer to assist in providing the authorized extra service, the Architect/Engineer shall receive one and one tenth (1.10) times the amount to be paid by the Architect/Engineer to the consultants for said services. Payment to consultants for services rendered is limited to direct project costs, including a maximum of two and one half (2.50) times the Direct Payroll Costs for Services of Principals and/or Employees for actual time expended to provide the authorized extra service.

CPDC staff have incorporated these requirements into a Supplementary General Conditions to the Design/Build Contract General Conditions, and these have been posted on the internet (www.calstate.edu/cpdc), for use by the campuses.



A Century Of Learning 1897-1997

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August 21, 2002

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



Dear Mr. Mandel:

The following is San Diego State University's response to KPMG Construction Cost Review Number 002-99, *Residential Suites & Residential Dining Complex*. For ease of reference, the recommendation has been included with our response. Audit recommendations (1 and 2) relevant to Capital Planning, Design, and Construction (CPDC) are being submitted under separate cover.

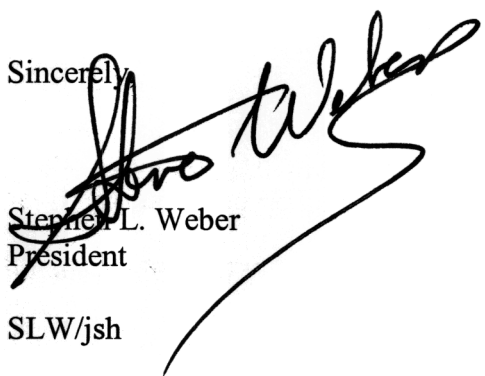
Recommendation 3

The University should pursue recovery of the balance for the subcontractor overcharges in the amount of \$20,604. Further, FPM should specifically direct project management consultants to the appropriate section of the CSU General Conditions to ensure that changes are appropriately reviewed and processed.

Campus Response

We concur. The University will attempt to pursue cost recovery with the contractor for subcontractor overcharges. We expect to have a resolution on this issue by January 2003.

Sincerely,



Stephen L. Weber
President

SLW/jsh

c: Sally F. Roush, Vice President, Business and Financial Affairs
Ellene J. Gibbs, Director, Business Information Management

THE CALIFORNIA STATE UNIVERSITY
OFFICE OF THE CHANCELLOR

BAKERSFIELD

CHANNEL ISLANDS

CHICO

DOMINGUEZ HIL

FRESNO

FULLERTON

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HUMBOLDT

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MARITIME ACADEMY

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POMONA

SACRAMENTO

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SAN DIEGO

SAN FRANCISCO

SAN JOSE

SAN LUIS OBISPO

SAN MARCOS

SONOMA

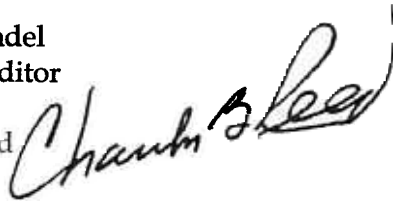
STANISLAUS

September 18, 2002

MEMORANDUM

TO: Mr. Larry Mandel
University Auditor

FROM: Charles B. Reed
Chancellor



SUBJECT: KPMG Draft Final Report on the *Residential Suites & Residential Dining Complex (Project No. 002-99)* at San Diego State University

In response to your memorandum of September 18, 2002, I accept the response as submitted with the draft final report on the *Residential Suites & Residential Dining Complex* project at San Diego State University.

CBR/amd

Enclosure

cc: Ellene Gibbs, Director, Business Information Management
Stephen L. Weber, President
Richard P. West, Executive Vice Chancellor and
Chief Financial Officer