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November 18, 2002

**CHAIRMAN OF THE BOARD
CHAIRMAN OF THE COMMITTEE ON GROUNDS AND BUILDINGS
CHAIRMAN OF THE COMMITTEE ON FINANCE
PRESIDENT OF THE UNIVERSITY**

**ACTION BY CONCURRENCE--AMENDMENT OF THE BUDGET FOR CAPITAL
IMPROVEMENTS AND THE CAPITAL IMPROVEMENT PROGRAM FOR
CENTRAL PLANT PHASE II, MEDICAL CENTER, DAVIS CAMPUS**

It is recommended that:

Pursuant to Standing Order 100.4 (q)

- (1) The President amend the 2002-03 Budget for Capital Improvements and the 2002-05 Capital Improvement Program to include the following project:

Davis: Central Plant Phase II – preliminary plans, working drawings, construction, and equipment – \$12,400,000 to be funded from hospital reserves.

A Key to the abbreviations and the project description are attached.

KEY
Capital Improvement Program Abbreviations

S	Studies
P	Preliminary Plans
W	Working Drawings
C	Construction
E	Equipment
-	State Funds (no abbreviation)
F	Federal Funds
G	Gifts
HR	Hospital Reserve Funds
I	California Institutes for Science and Innovation
LB	Bank Loans or Bonds (External Financing includes Garamendi, Bonds, Stand-By, Interim and Bank Loans)
LR	Regents' Loans (Internal Loans)
N	Reserves other than University Registration Fee (Housing and Parking Reserves)
R	University Registration Fee Reserves
U	Regents' Appropriations (President's Funds, Educational Fund)
X	Campus Funds
CCCI	California Construction Cost Index

2002-03 Budget for Capital Improvements and
2002-05 Capital Improvement Program
Scheduled for
Regents' Allocations, Loans, Income Reserves,
University Registration Fee Reserves, Gift Funds, and Miscellaneous Funds

Campus and Project Title (Total Cost)	Prefunded	Proposed 2002-03	Projected after 2002-03
<u>Davis</u>	P	\$ 800,000	HR
Central Plant Phase II	W	\$ 1,000,000	HR
	C	\$10,600,000	HR
(\$12,400,000)			

DESCRIPTION

This item seeks approval of a \$12,400,000 infrastructure project to expand the utility services at the Davis Medical Center.

Background

This Central Plant Expansion Phase II project is critically needed to support the utility requirements of the Davis Medical Center. The completion of several major capital improvement projects (including the Cancer Center addition, the Surgery and Emergency Services Pavilion, and the Tower II Phase 3 & 4 projects) will require utility support for more than 500,000 additional gross square feet of building space. A majority of this square footage is for patient care and treatment space that requires constant heating and cooling and the ability to routinely adjust temperatures in sensitive areas such as the Emergency Department, Pathology Department, Intensive Care Units, and the Operating Suites. Additionally, load calculations indicate that OSHPD would require expansion of the utility systems as an effect of these projects. The Central Plant Phase II project would satisfy the expected OSHPD requirements.

Project Description

This project would include:

- Two chillers (one absorption with a 1,000 ton capacity, and one centrifugal with a 2,000 ton capacity) to be connected into the existing chilled water distribution system.
- One four-cell concrete and fiberglass field-erected cooling tower to support the addition of the new chillers and replace the existing twelve "Tower Tech" cooling towers, which are operationally inefficient. Included in the tower installation are condenser water pumps, a water treatment system, associated piping, and a new screen wall (required to meet the 55 dB noise limit for the school approximately 300 yards away).

- An upgrade of the low-pressure boiler (15 PSI) to high pressure (150 PSI) for the production of the high-pressure steam required for the sterilizers in the operating suites and research buildings. Currently, there is no back up for the primary high-pressure boiler, making retrofit of this boiler for redundancy critical. The high-pressure upgrade will consist of replacing valves and trim on an existing low-pressure boiler. The existing low-pressure boiler came with a high-pressure vessel thus facilitating the retrofit from low to high pressure.
- Upgrades to the existing Davis Tower Emergency Power substations allow for a redundant connection in case of failure, thus ensuring a continued supply of emergency power.
- Addition of 80 control valves at various air handlers throughout the Medical Center allowing control of the flow of chilled water. By monitoring and regulating the volume of chilled water, efficiency will be enhanced and demand will be reduced. Together this will decrease energy consumption. Valves will also be added to the hot water system to allow adjustment of the hot water flow. This will improve the efficiency of the pumps, reduce pumping loads, and lower electrical consumption.

Construction on the project would start in April 2003 and would be completed by June 2004.

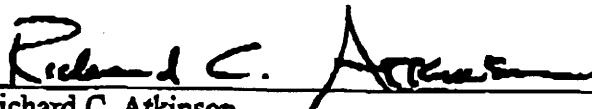
Environmental Classification

An Initial Study would be prepared for the project to determine the appropriate level of environmental documentation.

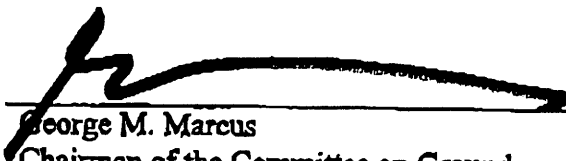
Financial Feasibility

The total project cost for the Central Plant Expansion, Phase 2 is \$12,400,000, to be funded by hospital reserves. Additional financial information may be found on Attachment 2.

Approved by:



Richard C. Atkinson
President of the University



George M. Marcus
Chairman of the Committee on Grounds and Buildings

Judith L. Hopkinson
Chairman of the Committee on Finance

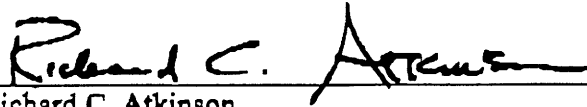
John Moores
Chairman of the Board

Attachments

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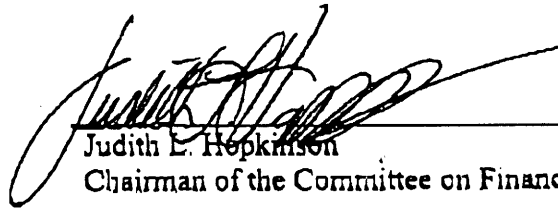
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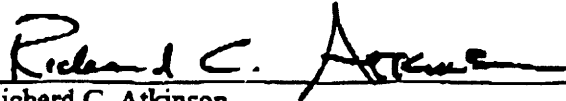
Judith E. Hopkinson
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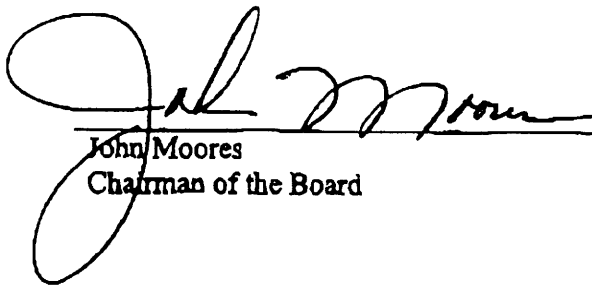
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Attachments

PROJECT STATISTICS
CENTRAL PLANT EXPANSION PHASE 2
CAPITAL IMPROVEMENT BUDGET
DAVIS CAMPUS MEDICAL CENTER
CCCI 4140

Cost Category	Amount	% of Total
Site Clearance		
Building	\$10,153,000	81.9
Exterior Utilities		
Site Development		
A/E Fees ^a	\$ 1,314,000	10.6
Campus Administration ^b	\$ 60,000	0.5
Surveys, Tests, Plans	\$ 129,000	1.0
Special Items ^c	\$ 236,000	1.9
Contingency	\$ 508,000	4.1
Total	\$12,400,000	100.0
Group 2 & 3 Equipment	0	
Total Project	\$12,400,000	

Statistics and Comparable Projects

Due to the unique nature of the proposal, no comparable University projects were identified. Work in and around an operating hospital must not be allowed to compromise ongoing hospital functions. This creates a complex construction management environment typically characterized by OSHPD oversight, incremental construction phasing, and contingencies for hospital operations. Considerations for logistics, access, noise, vibration, traffic control, and pedestrian/vehicular access heavily influence planning and construction activity. Because each hospital infrastructure project is unique, the project cost cannot be expressed in terms of any common unit cost.

^a A/E fees for basic services by the Executive Architect, and other design professionals who are part of the Design/Build Team. These services are carefully identified and delineated in the Design/Build contract.

^b Campus administration includes project management and inspection.

^c Special Items include interest during construction, independent seismic review, value engineering/constructability/ cost review, agency review, building system shutdowns, topographic surveys, geotechnical review, code consultants, focus EIR, & programming/detailed project program.

^d Gross square feet (gsf) is the total area, including useable area, stairways, and space occupied by the structure itself. Assignable square feet (asf) is the net program area.

Forecast of Key Operational and Financial Statistics (000)

FY Ending June 30:		Actual				Forecast			
		1999	2000	2001	2002	2003	2004	2005	2006
Volume	Average Daily Census (incl. Short Stay)	374	392	399	407	421	431	441	450
	ALOS (incl Short Stay)	4.5	4.7	4.8	4.8	4.8	4.8	4.8	4.8
	Patient Days (inc Short Stay)	136,617	143,464	145,747	148,610	153,665	157,323	161,003	164,115
	Discharge Totals (incl Short Stay)	30,488	30,706	30,573	30,762	32,340	32,922	33,679	34,491
	Discharge % of Total								
	Medicare %	22.7%	21.5%	19.1%	19.8%	17.7%	18.6%	18.7%	18.7%
	Medical %	21.5%	20.4%	20.7%	20.8%	20.3%	20.4%	20.5%	20.5%
	Counties%	9.1%	8.9%	8.8%	10.2%	9.5%	9.7%	9.6%	9.5%
	Contracts %	23.4%	25.4%	27.4%	28.1%	0.0%	0.0%	0.0%	0.0%
	Capitated %	20.6%	21.9%	21.9%	19.6%	21.1%	18.8%	18.7%	18.7%
	Private %	0.5%	0.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%
	Non-Sponsored %	2.2%	1.6%	1.8%	1.4%	1.2%	1.3%	1.2%	1.2%
O/P & ER Visits	961,622	884,969	806,323	840,653	893,994	910,086	931,018	947,981	
Revenue	Net Patient Revenue	624,922	619,020	636,598	679,449	743,080	769,896	804,692	837,121
	Other Operating Revenue	23,071	17,888	15,574	15,858	14,473	14,689	14,911	15,137
	Total Operating Revenue	647,993	636,908	652,172	695,307	757,553	784,586	819,603	852,258
Expense	Other Expenses	575,698	548,042	563,757	604,949	664,077	670,565	700,323	733,108
	Depreciation	35,369	42,883	43,356	43,799	45,030	48,754	49,962	47,519
	Total Operating Expenses	626,022	613,663	629,406	648,748	709,107	739,793	770,784	801,228
Income	Operating Income *	21,971	23,245	22,766	46,559	48,446	44,793	48,819	51,030
	Interest Expense	14,955	22,738	22,293	21,335	20,815	20,475	20,499	20,602
	Other Non-Operating Rev	7,393	6,332	10,683	10,097	8,599	8,069	7,808	7,797
	Net Gain	29,272	29,577	33,449	25,539	26,001	20,603	23,729	25,296
Cash	Cash Balance	141,698	137,444	166,683	213,314	166,280	131,985	156,103	131,470
	Net Increase/(Decrease) in Cash	(21,171)	(4,599)	29,239	38,889	(40,267)	(34,295)	24,118	(24,633)
	Days Cash On Hand	83	92	101	123	88	67	76	61
Ratios	Debt Service Coverage	3.4	3.4	3.16	3.35	3.45	2.95	2.79	2.67
	Debt Service/Revenue	3.7%	4.4%	4.3%	4.0%	3.7%	3.9%	4.1%	4.1%
	Debt to Capitalization	45.9%	44.1%	43.5%	42.0%	39.3%	38.7%	36.5%	33.5%
	Excess Margin	4.52	4.64	3.46	3.72%	3.93%	2.60%	2.87%	2.94%
% Increase	Net Patient Revenue	4.7%	-0.9%	2.9%	6.7%	9.4%	3.6%	4.5%	4.0%
	Operating Expense	7.9%	-2.0%	4.5%	2.9%	9.3%	4.3%	4.2%	3.9%

Notes:

* Interest Expense reclassified to Non-Operating beginning in FY 2002

November 2002