

REGISTER OF UNIVERSITY OF IOWA
CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Actions Requested: Consider recommending to the Board approval of:

1. Permission to proceed with project planning for the **Engineering Research Facility Addition** project, a major capital project as defined by Board policy.
 - a. Acknowledge receipt of the University's initial submission of information to address the Board's capital project evaluation criteria (see Attachment A);
 - b. Accept the Board Office recommendation that the project meets the necessary criteria for Board consideration; and
 - c. Authorize permission to proceed with project planning, including the architectural selection process.
2. Project description and budget (\$7,490,000) for the **Southeast Utilities Extension** project.
3. Revised project budget (\$41,432,500) for the **Chemistry Building Renovation** project.

Executive Summary: The **Engineering Research Facility Addition** project would construct an addition to provide additional laboratory and office space for the College of Engineering laboratory functions, primarily the Center for Computer-Aided Design (CADD). The additional space is necessary to respond to the projected growth in external research funding, estimated at 25 percent annually, and the associated increase in faculty, staff and students (which is expected to increase up to three-fold). The University reports that the existing office and laboratory space in the facility is no longer sufficient for current staffing levels, which have grown with increases in external funding from \$1.5 million to \$6 million in the last three years. CADD's continued success in external research funding is dependent upon evidence of commitment by the Center, College of Engineering and the University to maintain and grow resources and technical capabilities to meet future research demands. A map indicating the location of the Engineering Research Facility and the proposed addition is included as Attachment B.

The anticipated project cost of between \$4 million and \$5 million would be funded by College of Engineering Gifts and Earnings.

The **Southeast Utilities Extension** project would extend existing east campus utility lines to serve future southeast campus construction, including the Campus Recreation and Wellness Center and Madison Street Services Building.

The project budget of \$7,490,000 would be funded by the sale of Utility System Revenue Bonds.

The **Chemistry Building Renovation** project is upgrading the facility to provide modern, code-compliant laboratories to accommodate state-of-the-art instruction and research; new general university classrooms, a library, and administrative office area; and new building systems and windows.

The revised budget of \$41,432,500, an increase of \$6,232,500, reflects the addition of funding from the Carver Trust (\$3.45 million) for additional research space, along with additional funds from the College of Liberals Arts and Sciences to fit-out the newly remodeled space, and Building Renewal funds for additional fire safety and maintenance work.

Details of Projects:

Engineering Research Facility Addition

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning		March 2007	Requested

Southeast Utilities Extension

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 7,490,000	March 2007	Requested

<u>Project Budget</u>	
Construction	\$ 6,000,000
Design, Inspection, and Administration	
Consultants	550,000
Design and Construction Services	75,000
Contingencies	<u>865,000</u>
TOTAL	<u>\$ 7,490,000</u>

Chemistry Building Renovation

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Architectural Selection (Brooks Borg Skiles, Des Moines, IA)		Jan. 2003	Approved
Negotiated Architectural Agreement— Programming and Schematic Design (Brooks Borg Skiles, Des Moines, IA)	\$ 649,000	April 2003	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		Sept. 2003	Received with Capital Request
Interim Review and Consideration of Capital Project Evaluation Criteria		March 2004	Received Report
Program Statement		March 2004	Approved
Final Review and Consideration of Capital Project Evaluation Criteria		May 2004	Received Report
Schematic Design		May 2004	Approved
Project Description and Budget	35,200,000	May 2004	Approved
Architectural Agreement—Design Development Through Construction (Brooks Borg Skiles, Des Moines, IA)	2,778,984	May 2004	Approved
Construction Contract Award—Phase 1A - Chemical Stores Relocation, Greenhouse Demolition, Elec. Substation Construction (McComas-Lacina Construction)	1,248,000	July 2004	Ratified
Construction Contract Award—Phase 1B - Demolition (Selzer Werderitsch Assoc.)	438,000	May 2005	Not Required**
Construction Contract Award—Phase 1B - General Construction (Miron Construction)	17,156,900	Sept. 2005	Not Required**
Construction Contract Award—Phase 1B - Direct Digital Controls (Johnson Controls)	855,000	Sept. 2005	Not Required**
Construction Change Orders (Miron Construction Company)			
Change Orders #1- #3	31,801		Not Required*
Change Order #4	411,747	April 2006	Not Required**
Change Order #5	31,486		Not Required*
Change Order #6	30,816		Not Required*
Change Order #7	37,286		Not Required*
Change Order #8	195,546	Oct. 2006	Not Required**
Change Order #9	14,543		Not Required*
Change Order #10	67,784	Nov. 2006	Not Required**
Revised Project Budget	41,432,500	March 2007	Requested

*Approved by University in accordance with Board procedures.

**Approved by Executive Director in accordance with Board procedures

Project Budget

	Initial Budget <u>May 2004</u>	Revised Budget <u>March 2007</u>
Construction	\$ 28,160,000	\$ 33,183,200
Design, Inspection & Administration	4,224,000	4,949,580
Contingency	<u>2,816,000</u>	<u>3,299,720</u>
TOTAL	<u>\$ 35,200,000</u>	<u>\$ 41,432,500</u>
Source of Funds:		
Academic Building Revenue Bonds, Utility Improvement Funds, Income From Treasurer's Temporary Investments, and/or Building Renewal Funds	\$ 35,200,000	\$ 37,982,500
Carver Grant	<u>0</u>	<u>3,450,000</u>
TOTAL	<u>\$ 35,200,000</u>	<u>\$ 41,432,500</u>

Engineering Research Facility Addition

Evaluation Criteria

Since the project meets the Board's definition of a major capital project, the University has provided the following information in response to the Board's evaluation criteria.

Institutional Mission/Strategic Plan: The strategic plan for the Center for Computer-Aided Design (CCAD), a unit within the College of Engineering, projects an average annual growth rate of twenty-five percent in external grant revenues and operating income (a conservative estimate based on prior years growth rate). In order to successfully conduct expanded research activities and meet grant program performance requirements, the Center expects an increase in personnel staffing levels of two to three times existing numbers (faculty, staff and undergraduate and graduate students). CCAD has exhibited significant growth rates in the last three years, growing from an annual operating budget of \$1.5M to \$6M. An increase in personnel numbers has matched the increase in external funding, and as a result the office and laboratory space currently assigned is no longer sufficient.

Other Alternatives Explored: The current facility, completed in 1986, is fully programmed and occupied. One alternative was explored – to include additional CCAD space within the proposed Wave Basin facility, currently being studied (BOR Permission to Proceed, September 2007). This option is not considered acceptable in that (1) the time frame for construction of the Wave Basin facility does not meet CCAD's near-term needs for additional space, and (2) allocation of space at the Wave Basin facility would split CCAD's principal research activity into separate groups thus undermining a concerted effort to foster collaboration among researchers in the unit.

As the facility was originally designed to incorporate an addition, and co-location of faculty, staff and resources related to specific CCAD research is critical, it was concluded that an addition on the current site was the most appropriate and cost effective alternative.

Impact on Other Facilities and Square Footage: None

Financial Resources for Construction Project: Preliminary modeling indicates a project cost range between \$4M - \$5M. As additional planning is initiated, scope and associated costs will be verified. College of Engineering gifts and earnings, and debt serviced by indirect cost recoveries generated by the CCAD will support construction of the facility. Expansion of the facility is expected to increase annual Engineering Research Facility operating costs by 25% – 33%, solely due to increased square footage.

Financial Resources for Operations and Maintenance: Additional indirect cost recoveries generated by CCAD.

External Forces: CCAD's successful growth during the last four years has been contingent on significant federal and private research sponsorship agreements. The continuation of this success is dependent on tangible proof of commitment by the Center, the College of Engineering and the University to maintain and grow CCAD resources and technical capabilities to meet demands for research results in critical technological areas.

