BOARD OF REGENTS
STATE OF IOWA

AGENDA ITEM 3c
JUNE 20-22, 2006
REVISED

Contact: Sheila Doyle

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, including the architectural/engineering selection process, for the **Electrical Substation U Capacity Improvements** project.

2. Project description and budget for the **Power Plant – Boilers No. 5 and 6 Demolition** project ($3,000,000), and revised budget for the **West Campus Chilled Water Plant Expansion – Phase 1B** project ($29,865,000).

3. Permission to proceed with project planning and project description and budget for the **Carver-Hawkeye Arena – Replace Roof** project ($2,078,000).

Executive Summary: The **Electrical Substation U Capacity Improvements** project would install a third electrical transformer to expand the capacity of the electrical substation which provides the electrical interface with MidAmerican Energy Company for the purchased power consumed on the West Campus. Without this expansion, the increasing west campus electrical demand could cause one of the two existing transformers to fail, resulting in insufficient electrical capacity to support University Hospitals and other buildings on the West Campus. The anticipated project cost of $4.8 million would be funded by the sale of Utility System Revenue Bonds.

The **Power Plant – Boilers No. 5 and 6 Demolition** project would remove the two boilers (installed in 1951 and 1954) which were decommissioned by the University in 1998 as they had exceeded their useful lives. Removal of the boilers would provide space that would be used for other power plant operations. The project budget of $3 million would be funded by Utility System Repair and Improvement Funds and/or the sale of Utility System Revenue Bonds.

The **West Campus Chilled Water Plant Expansion – Phase 1B** project will expand the existing West Campus Chilled Water Plant (located near UIHC) by installing two 4,000 ton chillers within a building addition on the north end of the existing plant. The revised budget of $29,865,000, an increase of $5,715,000, would provide additional funding for the construction contract (which will be re-bid) and the redesign of the plant to accommodate a third 4,000 ton chiller. The project is funded by Utility System Revenue Bonds.

In December 2004, the Board received a report of the University's comprehensive study of its campus chilled water system. The study projected chilled water demand for the west and east campuses to exceed existing production capacity in 2006 and 2007, respectively, necessitating immediate chilled water plant improvements. The study provided specific recommendations for meeting the chilled water demands for the west and east campuses through 2011; included was the modernization and expansion of the West Campus Chilled Water Plant to be completed prior to the 2007 cooling season. In response to these recommendations, the University proceeded with the **Phase 2A** project to replace two chillers at the Plant prior to the 2006 cooling season, and the **Phase 1B** project to expand the Plant and install two additional chillers prior to the 2007 cooling season.

In December 2005, the University received construction bids for the **Phase 1B** project; all bids substantially exceeded the project construction budget. The University and the project engineers, Stanley Consultants, have evaluated the bids and attribute the high costs to several factors, including the aggressive project schedule to meet the 2007 cooling needs, increased labor shortages and costs due to the construction demand resulting from 2005 hurricane damage, increased materials costs associated with the growth in domestic and international construction projects, and increased transportation costs resulting from increases in oil prices.

The receipt of the high bids delayed the **Phase 1B** project and the expansion of the Plant's chilled water capacity by one year, until the 2008 cooling season. Therefore, to meet the 2007 campus chilled water need, the University received Executive Director approval of the **Phase 2B** project, which will supplement the **Phase 2A** project by replacing two additional chillers in the Plant to increase its capacity prior to the 2006 cooling season.

Completion of the **Phase 1B** project (expansion of the Plant) would now support longer-term campus chilled water needs through 2011. The **North Chilled Water River Crossing** project (approved May 2006) would connect the Plant with the East Campus to allow the additional Plant capacity to also address the increasing chilled water demand on the east side of the Iowa River, including buildings scheduled to become operational prior to 2011 (i.e., the renovated Chemistry Building.) The crossing would be done in lieu of construction of an East Campus Chilled Water Plant, which the University will continue to evaluate.

The University further reports that its chilled water needs beyond 2011 can be met with the installation of a third 4,000 ton chiller at the Plant as part of the **Phase 1B** project. Therefore, the University wishes to re-design the addition to support a third chiller, and include the installation of the chiller as an add alternate when the construction contract is re-bid. The chiller would be evaluated for installation with the **Phase 1B** project, subject to the receipt of favorable bids, or at a later date. The cost for the installation of the third chiller and associated equipment is estimated at $5 million; this amount is <u>not</u> included in the revised budget of $29,865,000.

<u>The **Carver-Hawkeye Arena – Replace Roof** project would replace the entire roof of the Arena. In the Department of Athletics Overview of Anticipated Facilities Improvements, presented to the Board in May 2006, the University reported the need to correct deferred maintenance deficiencies for the Arena, including replacement of the roof. The roof is 24 years old, with a typical life expectancy of 20 to 25 years for this type of roofing system. Since the roof suffered hail damage in the storm of April 13, 2006, and has reached the end of its useful life, the University reports that repair of the hail damage is not practical to maintain the roof in a watertight condition. Therefore, the University wishes to proceed with replacement of the roof at this time. The project would be funded by Athletic Department Revenues and Income from Treasurer's Temporary Investments. The University will pursue insurance coverage for damages incurred at this structure and other campus buildings due to the April storms.</u>

<u>The University anticipates commencing construction in September 2006 for completion of the main Arena roof replacement in October 2006. The University envisions completion of the entire project in December 2006; however, if this is not possible due to weather conditions and the coordination of athletic events, the University plans to complete the project in the spring of 2007.</u>

Details of Projects:

Electrical Substation U Capacity Improvements

Project Summary	Amount	Date	Board Action
Permission to Proceed		June 2006	Requested

Power Plant – Boilers No. 5 and 6 Demolition

Project Summary	Amount	Date	Board Action
Permission to Proceed		Sept. 2005	Approved
Project Description and Total Budget	$ 3,000,000	June 2006	Requested

West Campus Chilled Water Plant Expansion – Phase 1B

Project Summary	Amount	Date	Board Action
Permission to Proceed		June 2005	Approved
Project Description and Total Budget	$ 29,865,000	June 2006	Requested

Carver-Hawkeye Arena – Replace Roof

Project Summary	Amount	Date	Board Action
Permission to Proceed		June 2006	Requested
Project Description and Total Budget	$ 2,078,000	June 2006	Requested