

**MEMORANDUM**

**To:** Board of Regents

**From:** Board Office

**Subject:** Register of Iowa State University Capital Improvement Business Transactions for Period of January 18, 2002 Through March 14, 2002

**Date:** March 4, 2002

**Recommended Action:**

Approve the Register of Capital Improvement Business Transactions for Iowa State University.

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**Executive Summary:**

Requested  
Approvals

Permission to proceed with project planning for the **University Family Housing Community Center** project, which would construct a replacement facility to house various student service functions for the University Village residential neighborhood.

Project descriptions and budgets for:

**Telecommunications—Inside Plant Systems Upgrade—Phase 3** project (\$4,200,000) which would continue telecommunications upgrades for 17 additional campus buildings.

**Physics Hall and Physics Addition—Roof Repairs** project (\$389,670) which would replace the aging and deteriorated roof areas of the buildings.

**College of Design—Elevator Modernization** project (\$350,000) which would upgrade the elevators in the facility to comply with current codes.

Engineering agreements with:

Sebesta Blomberg and Associates, Roseville, Minnesota (\$823,300) for the **Utilities—North Campus Chilled Water Plant** project, which will construct a new chilled water plant to support projected campus growth.

- The plant would be designed to include two chillers with a total capacity of 6,000 to 8,000 tons of chilled water.

- Only one of the two chillers would be installed initially; the remaining chiller would be added as required by the University's growth.
- The University's selection committee determined that Sebesta Blomberg and Associates was the most qualified firm for the project based on its expertise and innovation in the design of large chilled water plants, its extensive experience with large chilled water systems and the installation of large chillers, and very favorable references.

Snyder and Associates, Ankeny, Iowa (\$19,978) for the **2002 Institutional Roads—Preventative Maintenance** project, which would provide various paving improvements on selected campus streets.

Farris Engineering, Omaha, Nebraska/Urbandale, Iowa (\$7,500) for high voltage electrical design services for the **Utilities Infrastructure—College of Business Building** project, which will extend campus utilities to the Gerdin Business Building.

Revised budgets for:

**Reiman Gardens—Conservatory** project (\$10,168,300) to restore plantings, landscaping and furnishings to the project.

**Beyer Hall—Replace Roof Sections D, E and F** project (\$272,000) for an increased project scope to include the replacement of concrete panels on the south façade of the building.

**College of Veterinary Medicine—Rooms 2146 and 2148 BL3 Laboratory Renovation** project (\$301,921), which was approved by the Executive Director to allow award of the construction contract.

Architectural amendment #3 (\$17,941) with Brooks Borg Skiles for the **Roy J. Carver Co-Laboratory** project for various design changes and the printing of additional bidding documents.

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**Background and Analysis:**

**University Family Housing Community Center**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		March 2002	Requested

Background	<p>Iowa State University requests permission to proceed with project planning to construct a community center to serve the University Village (family housing) residential neighborhood located on the University's north campus. (See Attachment A for map.)</p> <p>The project would provide a replacement facility to consolidate and enhance the existing student service functions in the University Village area.</p> <ul style="list-style-type: none"> <li>• The student support functions located at 100 University Village must be relocated to accommodate renovation of the facility for the North Campus Child Care Facility. (In September 2001, the Board approved the schematic design for the project which will house programs currently located in aging facilities in West Pammel Court.)</li> <li>• The Pammel Grocery, located immediately south of the Administrative Services Building, will be demolished due to its age (approximately 60 years) and deteriorated condition.</li> </ul>		
Project Scope	<p>The project would construct a facility of approximately 9,000 gross square feet to house program areas to serve students and their families, including a retail grocery store, meeting and office areas, student lounges, a kitchenette, and a fitness center.</p> <p>The project is consistent with the Department of Residence Master Plan which includes providing neighborhood-based services to meet the needs of the specific residential neighborhood.</p>		
Anticipated Cost	\$1,800,000.		
Anticipated Funding	Residence System and/or Income from Treasurer's Temporary Investments.		

**Telecommunications—Inside Plant Systems Upgrade—Phase 3**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 4,200,000	March 2002	Requested

Background	<p>The University is undertaking the upgrade of the communications infrastructure in a number of campus buildings.</p> <p>The work includes correction of various deficiencies such as the location of equipment entrances into the buildings, system security issues, outdated wiring that will not support current technology, and the lack of video and backup power systems.</p> <p>The University has identified and prioritized the various deficiencies associated with the communications infrastructure for each campus building, with the work to be undertaken as funding is available.</p> <p>The Phase 1 project completed upgrades in the College of Design and Applied Science II facilities; initiated upgrades in the Memorial Union, Insectary, and Parks Library; and provided design services for the upgrade of additional campus buildings.</p> <p>The Phase 2 project is undertaking similar telecommunications upgrades in 14 additional campus buildings.</p>
Project Scope	<p>The Phase 3 project would provide telecommunications upgrades for another 17 campus buildings. The project would replace voice and data cables, renovate equipment rooms to comply with current industry standards, and provide environmental systems, security access controls, raceway systems, and outlets.</p>
Funding	<p>Telecommunications Improvement and Extension Funds.</p>

Project Budget

Construction Cost	\$ 3,300,000
Professional Fees	800,000
Contingency	<u>100,000</u>
TOTAL	<u>\$ 4,200,000</u>

**Physics Hall and Physics Addition—Roof Repairs**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 389,670	March 2002	Requested
Background	<p>The existing roof areas of Physics Hall and the Physics Addition are 35 years of age or greater.</p> <p>The roof areas have outlived their life expectancy, leak, and require frequent repairs.</p>		
Project Scope	<p>The proposed project would replace 48,500 gross square feet (approximately 90 percent) of the roof areas with a rubber membrane roofing system.</p> <ul style="list-style-type: none"> <li>The rubber membrane material was selected based on its performance record, cost, and ease of repairs; the estimated life expectancy is 20 years.</li> </ul> <p>The project would also replace the flashings on the remaining 4,500 gross square feet of the roof area and repair moisture damage to the masonry walls.</p>		
Additional Information	<p>Permission to proceed with the project is not required since the project budget does not exceed \$1 million.</p>		

Project Budget

Construction Cost	\$ 329,000
Professional Fees	52,490
Contingency	<u>8,180</u>
TOTAL	<u>\$ 389,670</u>
Source of Funds:	
Building Repair Funds	\$ 314,670
Income from Treasurer's Temporary Investments	<u>75,000</u>
TOTAL	<u>\$ 389,670</u>

**College of Design—Elevator Modernization**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 350,000	March 2002	Requested
Background	The two elevators in the College of Design building are approximately 24 years in age, do not conform to current codes, and require an increasing number of repairs.		
Project Scope	The proposed project would rebuild and replace the elevator drive systems and controls, and reconfigure the car interiors to comply with accessibility requirements.		
Additional Information	Permission to proceed with the project is not required since the project budget does not exceed \$1 million.		
Funding	Building Repair Funds.		

Project Budget

Construction Cost	\$ 308,680
Professional Fees	37,770
Contingency	<u>3,550</u>
TOTAL	<u>\$ 350,000</u>

**Utilities—North Campus Chilled Water Plant**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Feb. 2001	Approved
Project Description and Total Budget	\$ 13,000,000	Feb. 2001	Approved
Engineering Agreement (Sebesta Blomberg and Associates) Roseville, MN)	823,300	March 2002	Requested

**Background**

This project will be undertaken in accordance with a 1993 Chilled Water Master Plan which was completed to project the growth in University chilled water requirements. The Master Plan indicated the need to construct additional chilled water production capacity by the year 2003. (Subsequent delays with some new building projects extended this deadline by approximately one year.)

The existing chilled water production equipment is housed in the University Power Plant. There is insufficient space at the Plant to expand the chilled water facilities, and construction of an addition to the Plant would not be cost effective.

Therefore, the Master Plan recommended the construction of a satellite chilled water plant to satisfy the University's future chilled water capacity requirements.

**Project Scope**

The plant would be constructed to house two chillers and would ultimately contain 6,000 to 8,000 tons of chilled water capacity; this would satisfy the University's chilled water needs past the year 2010. Only one of the two chillers would be installed initially; the remaining chiller would be added as required by the University's growth.

The University plans to construct the plant in the northern area of campus since this location would best support anticipated campus expansion.

Engineer  
Selection Process

In response to a solicitation of proposals and an advertisement in The Des Moines Register, the University received proposals from 11 midwestern firms, including five firms with Iowa offices, to provide engineering services for the project. The 11 firms were evaluated using criteria to identify the most qualified firm for the project.

- The selected firm would need to possess specialized engineering skills to design properly the installation of a large steam-driven chiller.
- Many consultants have experience in the design of smaller packaged chillers installed in buildings, but fewer consultants have experience with larger field-erected chillers, similar to this project.

The evaluation criteria for the proposals included:

- Experience within the past five years in the design and on-site installation of large (greater than 2,500 tons of capacity) steam-driven centrifugal chillers, and experience with large central chilled water systems.
- The estimated project design hours and proposed project schedule (to evaluate the firms' understanding of the scope of the project).
- A project schedule that would ensure operation of the chiller in the spring of 2004 to meet the requirements of several new campus facilities expected to be operational at that time.
- Staff resumes and experience of the project team.
- Iowa State University or other university experience.
- Iowa firm or Iowa subconsultants.
- References.

Following an initial evaluation of the proposals, five firms, including two firms with Iowa offices, were selected for further consideration by a University technical evaluation team. Based upon the firms' chilled water experience and reference checks, the University eliminated two firms from consideration and conducted interviews with the three remaining firms.



Based on further review of the qualifications of the three firms which were interviewed, the selection team determined that Sebesta Blomberg and Associates is the most qualified firm to provide engineering services for the project.

- Sebesta Blomberg is a leader in the design of large chilled water plants with significant experience in a university setting.
- The firm has extensive experience with large central chilled water systems and the installation of large steam-driven centrifugal chillers.
- Sebesta Blomberg has been innovative in the design of variable primary flow chilled water systems, which is a more energy efficient design for large chilled water systems; the University has used this approach since 1993.
- The firm's references were very complimentary, especially with respect to the individuals who would be working on the project.
- The project team will include Snyder and Associates of Ankeny, Iowa, to provide civil engineering services, and an Iowa architectural firm to be jointly selected by Sebesta Blomberg and the University.
  - The University estimates that approximately 20 percent to 25 percent of the design fees for the project will be paid to the Iowa firms.

Engineering  
Agreement

The agreement with Sebesta Blomberg and Associates would provide full design services from pre-design through construction for a fee of \$823,300, including reimbursables.

**2002 Institutional Roads—Preventative Maintenance**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 269,000	Jan. 2002	Approved
Engineering Agreement (Snyder and Associates, Ankeny, IA)	19,978	March 2002	Requested

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Background	<p>The University has identified street paving improvements for selected campus streets to extend the life of the pavement.</p> <ul style="list-style-type: none"> <li>• Included are portions of 13<sup>th</sup> Street, Pammel Road, Union Drive, Wallace Road, Stange Road, Hayward Avenue, Christensen Drive, Knoll Road and Edenburn Drive.</li> </ul>
Project Scope	The proposed project would include joint repair, joint filling, full depth patching, slab replacement, and asphalt overlay for the identified areas.
Engineering Agreement	The agreement with Snyder and Associates would provide full design services from pre-design through construction for a fee of \$19,978.
Funding	Institutional Roads Funds.

**Utilities Infrastructure—College of Business Building**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Budget and Total Budget ISU Engineering Services (all design services but high voltage electrical)	\$ 750,000	July 2001	Approved
Construction Contract Award— Steam Piping (Manning-Seivert Mechanical Contractors)	182,000	March 2002	Ratification
Engineering Agreement—High Voltage Electrical Service (Farris Engineering, Omaha, NE/ Urbandale, IA)	7,500	March 2002	Requested

Background	This project would extend utility services to the Gerdin Business Building site.
Project Scope	The project includes the installation of chilled water, natural gas, sanitary and storm water sewers, and electric and steam extensions.
Engineering Agreement	The agreement with Farris Engineering would provide construction phase design services, including construction documents, for the installation of a high voltage electrical system between the Gerdin Business Building and the existing high voltage switchgear near Curtiss Hall. The agreement provides for a fee of \$7,500, including reimbursables.
Funding	Utilities Enterprise Funds.

**Reiman Gardens—Conservatory**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		March 1999	Approved
Project Description and Total Budget	\$ 7,835,300	July 1999	Approved
Architectural Agreement through Schematic Design (Architects Smith Metzger)	739,740	July 1999	Approved
Program Statement		Nov. 1999	Approved
Schematic Design		June 2000	Approved
Revised Project Budget	9,624,300	June 2000	Approved
Architectural Amendment #1	97,790	June 2000	Approved
Construction Contract Award (Story Construction Company)	7,778,000	June 2001	Ratified
Revised Project Budget	9,901,300	June 2001	Approved
Architectural Amendment #2	15,525		Approved*
Architectural Amendment #3	38,200	July 2001	Approved
Revised Project Budget	10,168,300	March 2002	Requested

\*Approved by the University in accordance with Board procedures.

**Background** This project will construct a conservatory facility at the Reiman Gardens to support the University's multi-disciplinary academic programs and extension activities at the Gardens, particularly those activities of the Department of Horticulture.

**Project Scope** The primary features of the facility include a glass structure garden conservatory area which will be used for permanent and rotating plant displays, growing greenhouses for plant production, a head house for preparation of plants for production and display, and a butterfly flight house and laboratory.

The facility will also include an auditorium and multi-purpose room for educational and outreach activities consisting of demonstrations, classes and seminars, and a café/kitchen area and gift shop to serve visitors.

**Revised Budget** The revised budget of \$10,168,300, an increase of \$267,000, includes additional funds for plantings, landscaping and furnishings.

- These items, which were previously removed from the project to provide additional funds for construction, can now be restored to the project due to availability of additional funds.

**Funding** The revised budget also includes grant funding from the Department of Natural Resources for the installation of brick walkways in lieu of gravel. The additional funds would be provided from private funds, Income from Treasurer's Temporary Investments, and the Department of Natural

Resources.

Project Budget

	Revised Budget <u>June 2001</u>	Revised Budget <u>March 2002</u>
Construction Costs	\$ 8,338,600	\$ 8,376,920
Professional Fees	1,503,200	1,531,600
Movable Equipment	20,000	230,000
Contingency	<u>39,500</u>	<u>29,780</u>
TOTAL	<u>\$ 9,901,300</u>	<u>\$ 10,168,300</u>
Source of Funds:		
Private Giving	\$ 9,849,300	\$ 9,876,300
Income from Treasurer's Temporary Investments	52,000	250,000
Iowa Department of Natural Resources	<u>0</u>	<u>42,000</u>
TOTAL	<u>\$ 9,901,300</u>	<u>\$ 10,168,300</u>

**Beyer Hall—Replace Roof Sections D, E, and F**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget ISU Engineering Services (roofing design) Construction Contract Award (Central States Roofing)	\$ 211,870	June 2001	Ratified*
Structural Engineering Services— (Charles Saul Engineering, Des Moines, IA)	74,500	Nov. 2001	Not Required* Not Required*
Revised Project Budget	272,000	March 2002	Requested

\*Approved by Executive Director and University in accordance with Board procedures.

Background	The project will replace a portion of the Beyer Hall roof. The project includes the installation of a rubber membrane roofing system and other associated roofing and masonry repairs.
Revised Budget	The revised budget of \$272,000, an increase of \$60,130, includes the installation of concrete panels and associated repairs on the south facade of the building to replace existing pre-cast concrete panels which have begun to collapse.
Funding	The additional funds would be provided by Building Repair Funds.

Project Budget

	<u>Initial Budget June 2001</u>	<u>Revised Budget March 2002</u>
Construction Costs	\$ 178,840	\$ 217,470
Professional Fees	28,460	47,100
Contingency	<u>4,570</u>	<u>7,430</u>
TOTAL	<u>\$ 211,870</u>	<u>\$ 272,000</u>
Source of Funds:		
General University Funds	\$ 211,870	\$ 211,870
Building Repair Funds	<u>0</u>	<u>60,130</u>
TOTAL	<u>\$ 211,870</u>	<u>\$ 272,000</u>

**College of Veterinary Medicine—Rooms 2146 and 2148 BL3 Laboratory Renovation**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Project Description and Total Budget	\$ 125,000	June 2000	Not Required*
Architectural Agreement (VGI Design, Des Moines, IA)	18,750	July 2000	Not Required*
Revised Project Budget	136,540	Feb. 2001	Not Required*
Construction Contract Award—Phase 1 (R. D. Stewart)	88,927	Feb. 2001	Not Required*
Revised Project Budget	283,000	June 2001	Approved
Architectural Amendments #1 and #2	3,881		Not Required*
Architectural Amendment #3	14,000	Sept. 2001	Approved
Revised Project Budget	301,921	March 2002	Ratification*
Construction Contract Award—Phase 2 (The Keystone Group)	138,000	March 2002	Ratification

\* Approved by the Board Office and University in accordance with Board procedures.

**Background**      The project will renovate 500 square feet of laboratory space in the Veterinary Medicine facilities to meet National Institutes of Health guidelines for conducting research on Biosafety Level 3 (BL3) pathogens.

**Revised Budget**      The revised budget of \$301,921, an increase of \$18,921, was approved by the Executive Director to allow award of the construction contract. The revised budget includes the installation of a more efficient autoclave and a higher efficiency fan system, and demolition and restoration of a wall to provide more usable space.

**Funding**      General University Funds.

Project Budget

	<u>Revised Budget June 2001</u>	<u>Revised Budget March 2002</u>
Construction Costs	\$ 213,890	\$ 237,715
Professional Fees	49,750	57,511
Contingency	<u>19,360</u>	<u>6,695</u>
<b>TOTAL</b>	<b><u>\$ 283,000</u></b>	<b><u>\$ 301,921</u></b>

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Dec. 1999	Approved
Project Description and Total Budget	\$ 7,000,000	Dec. 1999	Approved
Architectural/Engineering Agreement— Schematic Design & Site Planning (Brooks Borg and Skiles)	150,000	March 2000	Approved
Revised Project Budget	9,200,000	June 2000	Approved
Architectural Amendment #1 (Brooks Borg and Skiles)	48,000	June 2000	Approved
Program Statement		July 2000	Approved
Schematic Design		Oct. 2000	Approved
Revised Project Budget	9,500,000	Oct. 2000	Approved
Architectural/Engineering Agreement— Design Development through Construction (Brooks Borg and Skiles)	519,000	Oct. 2000	Approved
Revised Project Budget	12,750,000	May 2001	Approved
Architectural Amendment #1	264,000	June 2001	Approved
Architectural Amendment #2	36,840	Oct. 2001	Approved
Construction Contract Award (HPC, L.L.C.)	7,570,000	Nov. 2001	Ratified
Architectural Amendment #3 (Brooks Borg and Skiles)	17,941	March 2002	Requested

**Background**      The project will construct a new facility where scientists from Iowa State University, private industry, and the world can meet in a collaborative and interactive environment to conduct state-of-the-art plant research and address critical issues in plant science.

The building, which is under construction in the northwest area of campus, will provide state-of-the-art laboratories, research space for visiting scientists, and small laboratories for industry incubators.



Architectural  
Amendment

The amendment to the architectural agreement (**\$17,941**) would provide compensation for the following:

- Design changes to laboratory casework, and preliminary design and estimating services to develop laboratory and growth chamber areas in existing ground level storage space (requested by the Plant Sciences Institute).
- Design changes to provide smoke doors from the building corridors to computer areas (requested by the State Fire Marshal).
- Printing of additional bidding documents due to extensive bidder interest in the construction project.

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Included in the University's capital register for Board ratification are nine project budgets under \$250,000, one amendment approved by the University, two construction contracts awarded by the Executive Director, the acceptance of five completed construction contracts, and two final reports. These items are listed in the register prepared by the University and are included in the Regent Exhibit Book.

  
Sheila Lodge

Approved:   
Gregory S. Nichols