

Contact: Joan Racki

REGISTER OF IOWA STATE UNIVERSITY
CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Action Requested: Consider approval of the:

1. Following actions for the **Frederiksen Court Expansion** project:
 - a. Acknowledge receipt of the University's initial submission of information to address the Board's capital project evaluation criteria (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 design professional selection process, and consideration of the use of a construction manager – agent for the project.
2. Following actions for the **MacKay Hall – Auditorium 117 Remodeling** and the **Jeff and Deb Hansen Agriculture Student Learning Center** projects:
 - a. Acknowledge receipt of the University's final submission of information to address the Board's capital project evaluation criteria (Attachment B for the MacKay Hall – Auditorium and Attachment C for the Hansen Agriculture Student Learning Center);
 - b. Accept the Board Office recommendation that the projects meet the necessary criteria for Board consideration; and
 - c. Approve the schematic design for the projects and the project description and budget (\$7,300,000) for the Agriculture Student Learning Center, with the understanding that approval will constitute final Board approval and authorization to proceed with construction of the projects.
3. Project description and budget (\$3,500,000) for the **Utilities – Northwest Campus Substation** project.

Executive Summary:

To accommodate recent increases in demand for on-campus housing, the University requests permission to proceed with project planning, including the design professional selection process and consideration of the use of a construction manager – agent, for the **Frederiksen Court Expansion** project. The anticipated facility will provide for up to seven new student apartment buildings at Frederiksen Court, each with twenty-four apartments with four single bedrooms. The University intends to use the 1999 construction documents with minor floor plan changes, better energy performance and sustainable practices with a project goal of LEED gold certification. The work would include utilities, parking and other related services associated with apartment development. The estimated project cost of \$24.3 million would be funded by Dormitory Revenue Bonds. The location of Frederiksen Court is included as part of Attachment A.

While the MacKay Hall auditorium is in a premier location on central campus and easily accessible to students and faculty, it is one of the least desired auditoriums for teaching due to its current overall condition and configuration of the space. The University requests approval of the schematic design for the **MacKay Hall – Auditorium 117 Remodeling** project, which would upgrade the space to improve the learning environment for both students and faculty. Work would include an upgrade of audiovisual technology, and new seating to maximize capacity to facilitate student interaction, as well as the updating of public spaces associated with the auditorium, classroom 213 and departmental spaces in rooms 309 and 311. The schematic design booklet, which is included with the Board’s agenda materials, includes the location of MacKay Hall. The Board previously approved a \$3,230,000 budget for the project.

Presented for Board approval is the schematic design and budget (\$7,300,000) for the **Jeff and Deb Hansen Agriculture Student Learning Center**, which would enhance interaction with animals, education and outreach in animal agriculture, helping to ensure a strong animal agriculture workforce. The facility will include teaching and meeting facilities, an arena and support spaces. The schematic design booklet, which is included with the Board’s agenda materials, includes the proposed location of the Student Learning Center. The project budget would be funded by private giving in the amount of \$7,000,000 and University Funds in the amount of \$300,000.

Construction and renovations throughout campus have increased loading on campus electrical substations; a failure of one of them could result in an extended electrical outage for a large portion of the campus. Therefore, the University requests approval of the project description and budget (\$3,500,000) for the **Utilities – Northwest Campus Substation** project, which would construct a new electrical substation to the northwest of the Communications Building. (See Attachment D for a map showing the location.) The new substation will initially provide service to the new Agricultural and Biosystems Engineering Building, currently under construction, and the Biorenewables Research Building, relocating a portion of the electrical load for this building from another substation. The project, which will be funded by Utility System Funds, also includes the required underground feeders.

Details of the Projects:

Frederiksen Court Expansion

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|--|---------------|-------------|---------------------|
| Permission to Proceed with Project Planning | | Aug. 2012 | Requested |
| Initial Review and Consideration of Capital | | | Receive |
| Project Evaluation Criteria | | | Report |
| Consider Use of Construction Manager - Agent | | | Requested |

The University reports that a recent housing shortfall for Fall 2011 resulted in assigning approximately 185 students in floor dens for the fall semester. This number is expected to grow to 425 students for Fall 2012. Current residents, Inter-Residence Hall Council members, and Government of the Student Body Executives have voiced strong objections over using dens (any non-permanent room assignments) in the future, as this results in providing a

challenging living environment. Community space is integral to providing support for student learning/academic success, leadership development, and socialization. The University reports that student leaders are also concerned that one hundred percent occupancy in the residence halls leaves no options should a student wish to relocate.

The University requests permission to consider the use of a Construction Manager – Agent (CM) delivery system for this project. This is a high priority University project, with a relatively short schedule. The project will involve the construction of multiple buildings on a several sites with the potential for concurrent or partially concurrent schedules. The use of a CM delivery method would provide the flexibility in packaging and bidding the work which may be necessary to assure that all commitments are met and that the phasing schemes are feasible and cost effective. As the project scope, schedule, and phasing are defined, the University will determine whether the project CM delivery method would provide benefit to the project. If this determination is made, the University will seek authorization from the Executive Director to proceed with the advertisement for construction management services. If utilized, the CM would serve as the University’s agent in coordinating and managing multiple prime contractors to complete the project.

MackKay Hall – Auditorium 117 Remodeling

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|---|---------------|-------------|-------------------------------|
| Permission to Proceed with Project Planning Initial Review and Consideration of Capital Project Evaluation Criteria | | Dec. 2011 | Approved Receive Report |
| Selection of Design Professional (Brooks Borg Skiles; Des Moines, IA) | | Feb. 2012 | Not Required* |
| Project Description and Budget | \$3,230,000 | Mar. 2012 | Approved |
| Design Professional Agreement (full design Services) | 337,140 | April 2012 | Not Required* |
| Schematic Design | | Aug. 2012 | Requested |
| Final Review and Consideration of Capital Project Evaluation Criteria | | Aug. 2012 | Receive Report |

*Approved by Executive Director, consistent with Board policies

MackKay Hall is a prominent building on the Iowa State University campus. Originally built in 1911, with an addition in 1926, it stands as the northern facade of the historic central campus. The building and auditorium are named after Catherine J. MacKay, the Dean of Home Economics from 1913 to 1921. It is currently home to the College of Human Sciences.

The remodeling will renovate and refurbish existing space on the first and second floors of MacKay Hall. Designed to respect the historical character of the space, the envelope of the existing auditorium will be revived and enhanced, while the new contemporary seating arrangement for 215 students will support teaching and learning in an interactive classroom.

The square footages in the approved building program and the schematic design are the same, and are as follows:

| | Building Program and Schematic Design |
|--------------------------------------|--|
| Auditorium | 3,697 |
| Room 118 | 1,088 |
| Classroom | <u>745</u> |
| Total Net Square Feet | 5,530 |
| Corridor | 2,190 |
| South Entry Vestibule | <u>730</u> |
| Total Net Non-Assignable Square Feet | 2,920 |
| Total Square Feet | 8,450 |

It is anticipated that the project will be bid in November 2012, with construction substantially complete by August 2014.

Jeff and Deb Hansen Agriculture Student Learning Center (formerly known as Phase 2 [Pavilion component] of Dairy / Animal Science Education and Discovery Facility)

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|--|---------------|-------------|---------------------|
| Permission to Proceed with Project Planning | | Aug. 2004 | Approved |
| Interim Review and Consideration of Capital Project Evaluation Criteria | | Aug. 2004 | Received Report |
| Program Statement | | Aug. 2004 | Approved |
| Approval of Architectural Agreement, including Schematic Design for Phase 2 (OPN Architects; Des Moines, IA) | | Aug. 2004 | Approved |
| Naming of Facility as Jeff and Deb Hansen Agriculture Student Learning Center | | Mar. 2012 | Approved |
| Schematic Design | | Aug. 2012 | Requested |
| Project Description and Budget | \$7,300,000 | Aug. 2012 | Requested |
| Final Review and Consideration of Capital Project Evaluation Criteria | | Aug. 2012 | Receive Report |

*Approved by Executive Director, consistent with Board policies

The main entrance to the facility enters into a common atrium with entrances to classrooms (four rooms accommodating up to 35 individuals each), office space, meeting area, and restrooms.

The facility would include an arena, with access from the main entrance atrium, with seating for approximately 1,000 individuals. The arena will be heated during the winter, making it an ideal location for livestock judging and skills competition, short courses, training sessions, and livestock, dog and equestrian shows. The arena can also be accessed from the three other sides for easy animal and vehicle movement in and out of the space.

The facility will be a pre-engineered steel building, the most efficient method to achieve the large span needed for this type of facility. The main west entrance and façade will be precast concrete panels or masonry, with large glass areas for natural lighting. The major portion of the building enclosure will be steel with lined insulation on the walls and roof.

The following compares the square footages in the approved program and the schematic design:

| <u>Function</u> | <u>Program (GSF)</u> | <u>Schematic Design (NSF)</u> |
|---------------------------------|--------------------------|-----------------------------------|
| Classrooms, Meeting Room | | 4,900 |
| Office | | 320 |
| Building Entrance, Atrium | | 4,200 |
| Concession Area | | 160 |
| Arena Seating | | <u>6,000</u> |
| Teaching and Meeting Facilities | <u>6,000</u> | |
| Subtotal | 6,000 | 15,580 |
| Arena | 42,000 | 34,400 |
| Animal Holding Area | 60,000 | ----- |
| | | 53,280 |
| Building Total | 108,000 GSF | 60,400 GSF |

As noted above, the schematic design does not include the 60,000 gross square foot animal holding area, which was included in the building program. The animal holding was removed for budgetary reasons and does not affect the functionality of the facility. If there is a need for temporary animal holding, tents can be rented. With the elimination of animal holding, a staging area was added.

Project Budget

| | |
|------------------------|--------------------|
| Construction | \$6,267,400 |
| Design and Supervision | 862,120 |
| Movable Equipment | 40,000 |
| Contingency | <u>130,480</u> |
| TOTAL | <u>\$7,300,000</u> |
| Source of Funds: | |
| Private Giving | \$7,000,000 |
| University Funds | <u>300,000</u> |
| TOTAL | <u>\$7,300,000</u> |

Construction is anticipated to begin in late fall 2012

Utilities – Northwest Campus Substation

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|--------------------------------|---------------|-------------|---------------------|
| Project Description and Budget | \$3,500,000 | Aug. 2012 | Requested |

The project would include installation of a new 7,500 kva transformer, 13,800 volt and 4,160 volt switchgear, foundations, underground raceways, high voltage cables and site security fencing. The project also includes new underground feeders and raceways in select locations, enabling the shifting of electrical loads from other substations.

The new substation will be designed and have the capacity to be expanded to serve new electrical loads for new or renovated facilities in the northwest quadrant of campus.

Project Budget

| | |
|------------------------|--------------------|
| Construction | \$2,790,000 |
| Design and Supervision | 610,000 |
| Contingency | <u>100,000</u> |
| TOTAL | <u>\$3,500,000</u> |

Source of Funds: Utility System Improvement Funds

Frederiksen Court Expansion
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: Student Success is one of the core missions of Iowa State University. On-campus housing contributes in the following ways:

On-campus students of all classifications achieved higher GPA's than their off-campus peers:

- 2.63 vs. 2.31 for Freshmen
- 2.85 vs. 2.58 for Sophomores
- 2.98 vs. 2.75 for Juniors
- 3.21 vs. 3.04 for Seniors

More Likely to Graduate Cyclones: 72% of freshmen who started at Iowa State in Fall 2007 had earned or were still seeking a degree at Iowa State (compared to 66% of freshmen who lived off-campus).

First Year to Second Year Persistence: 88% of freshmen who were enrolled in Fall 2010 were still enrolled at ISU in Fall 2011 (compared to 83% of freshmen who lived off-campus).

Take More Classes: On-campus students report enrolling for more courses than off-campus students.

Learning Communities: Students in learning communities reported higher campus involvement and peer connections as well as a higher overall evaluation of the university and their experience.

MAP-Works: 86% of on-campus freshmen took MAP-Works, an online assessment tool sponsored by the Department of Residence designed to help students make a successful transition to life at ISU.

- Students who took MAP-Works (2.80 GPA Fall 2011) recorded significantly higher GPAs than non-participants (2.45 GPA Fall 2011)
- 89% of MAP-Works participants who started at Iowa State in Fall 2010 were enrolled at ISU in Fall 2011 (compared to 80% of non-participants).

They Like ISU: On-campus residents have significantly higher goal commitment, social integration, evaluation of the university, and GPA, and significantly lower homesickness.

Well-Rounded: Students living on campus are more likely to report understanding people of diverse backgrounds, getting the support they need to help them succeed academically, getting help coping with non-academic responsibilities, getting the support they need to thrive socially, and attending campus events and activities than off-campus students.

Less binge drinking by students living in university housing.

They Lead: There are over 1,200 students in leadership positions in the residence halls and apartment communities.

They're Involved: On-campus students self-report being significantly more likely to participate in intramural sports and attend a student function, including sporting events, plays and art exhibits.

Relax and Socialize: Students who live on campus spend more hours relaxing or socializing.

Other Alternatives Explored: Several alternatives to meet expanding student demand for on-campus housing have been considered. These alternatives include:

On-Campus

- Residence Halls, traditional
- Residence Halls, suites
- Residence Halls, combination of traditional and suites
- Apartments
- Repurposing space such as Memorial Union hotel

Off-Campus

- Lease off-campus apartments/properties
- Lease off-campus motels
- Purchase off-campus apartments/properties
- Contract for construction and operation of off-campus apartments

In the evaluation of these alternatives several issues were considered.

- Duration of need/demand for housing need
- Timeframe to acquire/construct housing
- Cost to construct, maintain and operate
- Location
- Impact to Department of Residence financials
- Impact to Dining Services and demand
- Student satisfaction and impact to overall enrollment
- Student outcomes and experiences

The expansion of Frederiksen Court was identified as the most feasible alternative to provide the quality living and learning environment students have come to expect and value from the Iowa State University experience. Additionally this strategy (to construct apartments) responds to an unmet need for housing type that currently exists in the system.

Project Size and Disposition of Existing Space: This project adds approximately 189,000 GSF to the residential inventory to provide 658 beds; no space will be vacated as a result of this project.

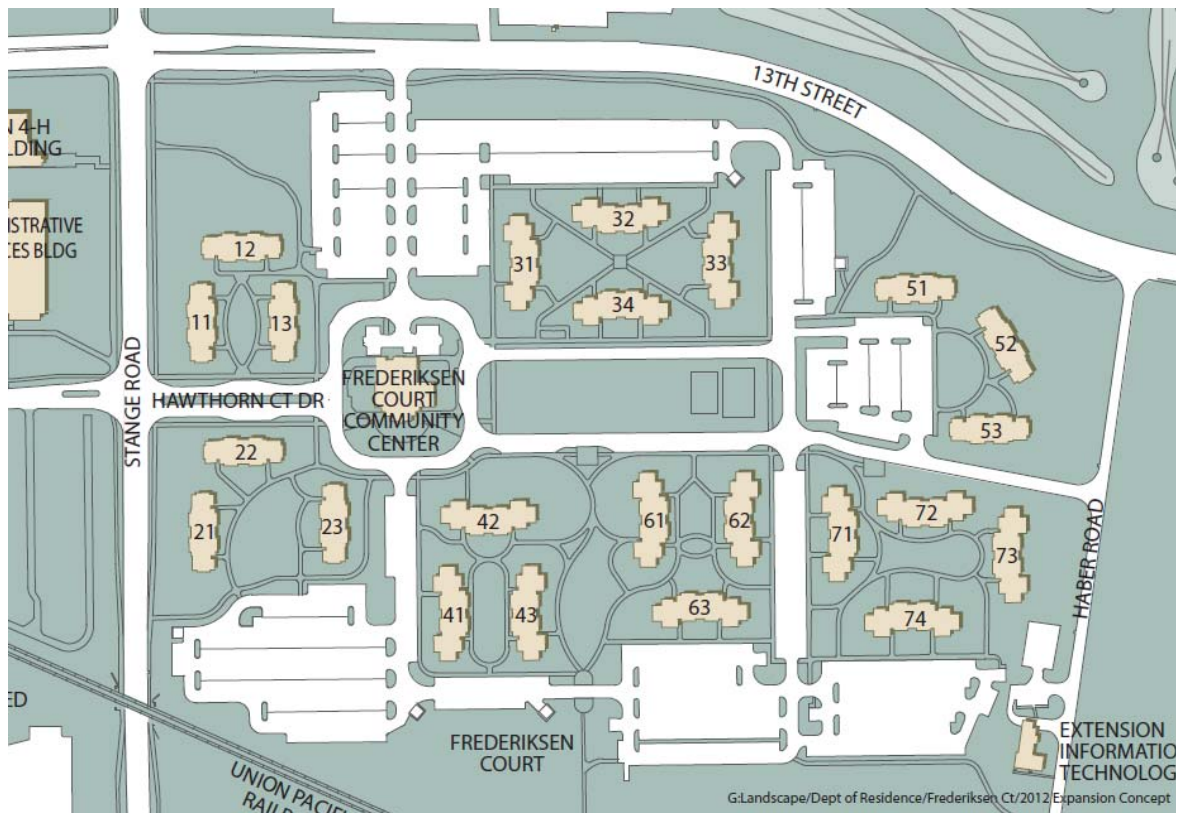
Financial Resources for Construction Project: Estimated project funds of \$24,267,166 will be debt financed using Department of Residence revenues generated by student housing contracts. Total costs including bond costs are estimated to be \$27 million. A preliminary proforma has been developed. Initial discussions with Springsted indicate that the additional debt will be positively received in the market, maintaining existing credit ratings. Using conservative estimates, bond coverage ratios remain at acceptable levels of 1.6 to 1.9

substantially above the 1.35 covenant requirement. Adequate cash flows and surplus reserves remain in the Department of Residence System for continual renovations and modifications that may be necessary in future years. This supplemental information has been provided to the Board office. A final proposed budget will be submitted with the schematic design.

Financial Resources for Operations and Maintenance: The maintenance and operational costs are estimated at \$361,000 and will be funded through revenues generated by the housing contracts from these additional apartments.

Compelling External Agency or Policy Issues: The Ames economy continues to improve. Private off-campus housing continues to be constructed. Conversations with major rental property operators serving the student market indicate high occupancy rates. Based upon current enrollment and projected growth, proceeding to plan for this project meets an identified need of demand for on-campus university housing for a significant number of students. The university will continue to communicate with the local community.

Frederiksen Court



**MacKay Hall – Auditorium 117 Remodeling
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: MacKay Hall Auditorium has been developed to meet the needs of the students and faculty of Iowa State University. The University has projected that class sizes will increase and the size and availability of classrooms on campus will not meet the growing need for space on campus.

Envisioned as interactive highly creative flexible learning environment that will promote engagement of faculty with students and encourage students to be active participants in their educational experience, the remodeling of MacKay Hall Auditorium will improve both the availability, but also the quality of large lecture facilities on campus. It will accomplish this with the careful configuration of the existing auditorium seating and integration of state-of-the art learning and teaching technology.

Other Alternatives Explored: A feasibility study was conducted in August 2009 that looked at several options for Mackay Hall. Numerous options were explored for the renovation of the auditorium and remodeling the existing space was the most cost effective solution.

Project Size and Disposition of Existing Space: No space will be vacated as a result of this project.

Financial Resources for Construction Project: This project will be funded by general university funds.

Financial Resources for Operations and Maintenance: No additional operating and maintenance expenses are anticipated.

Jeff and Deb Hansen Agriculture Student Learning Center
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 university has priorities to strengthen undergraduate education by creating an environment that welcomes students to explore a variety of disciplines and career paths, and partner with K-12 schools and community colleges to facilitate transfer to Iowa State University. This facility will be multi-departmental and will bring in potential students from throughout the state for many youth activities. This facility will serve as an academic facility that is not currently available at the university and serve as an excellent recruiting tool. There are numerous youth activities that will use this facility throughout the year, each bringing hundreds of potential future Iowa State University students to campus.

Other Alternatives Explored: There are no present facilities at the university that can fulfill this program or meet the needs. The size, location, and program options for this facility make it valuable.

Project Size and Disposition of Existing Space: The pavilion will be approximately 60,400 gsf and will occupy a 15-acre site. No existing space will be eliminated.

Financial Resources for Construction Project: The project is being funded with private giving and general university funds.

Financial Resources for Operations and Maintenance: The operating and maintenance costs will be funded through the college, and through activities that will use this facility.

External Forces Justifying Approval: The expectation for excellent student facilities will enhance education and aid recruitment.

