

Contact: John Nash

REGISTER OF IOWA STATE UNIVERSITY
CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Actions Requested: Consider recommending to the Board approval of the:

1. Following actions for the **Student Innovation Center** and **Richardson Court Residence Halls – Bathroom Remodeling** projects; both major capital projects as defined by Board policy:
 - a. Acknowledge receipt of the University's final submission of information to address the Board's capital project evaluation criteria (see Attachment A and B);
 - b. Accept the Board Office recommendation that the projects meet the necessary criteria for Board consideration; and
 - c. Approve the project descriptions and budgets (\$84,000,000) for Student Innovation and (\$11,444,170) for Richardson Court and the schematic design for Student Innovation, with the understanding that approval would constitute final Board approval and authorization to proceed with construction.
2. Project descriptions and budgets (\$2,700,000) for the **Wallace and Wilson Residence Halls – Life Cycle Replacement** and (\$3,300,000) for the **Wallace and Wilson Residence Halls – Window Replacement** projects.

Executive Summary:

The University requests approval of the schematic design and project description and budget for the **Student Innovation Center** (Center) project, which would construct a new student-focused facility to provide a high-quality, centralized space to support a student-driven culture of innovation. The Center would be a highly flexible, dynamic space that encourages experimentation and interdisciplinary investigation by providing space for prototyping, fabrication, and smaller-scale spaces for bench-top sized projects. It would also include state-of-the-art classrooms with easy access to specialized equipment, materials, tools, computer-aided design, and virtual reality.

This project would also demolish the Nuclear Engineering Laboratory, constructed in 1934, and the southeast end of Sweeney Hall (Old Sweeney), constructed in 1927. The demolition of these buildings would eliminate \$3 million in deferred maintenance costs. The project location can be found on the map in the schematic design booklet included in the Board's agenda materials. The project budget of \$84,000,000 would be funded by state appropriations and private giving.

The University requests approval of the project descriptions and budgets for three projects: **Richardson Court Residence Halls – Bathroom Remodeling**, **Wallace and Wilson Residence Halls – Life Cycle Replacement**, and **Wallace and Wilson Residence Halls – Window Replacement**.

The **Richardson Court Residence Halls – Bathroom Remodeling** project would remodel bathrooms for 817 students throughout six residence halls: Birch, Welch, Roberts, Barton, Lyon, and Freeman Halls (see Attachment C for location). This project would create more privacy, provide

restroom accessibility to meet the Americans with Disabilities Act, update inefficient mechanical/electrical/plumbing systems, enhance lighting, and upgrade energy efficiency. The project budget of \$11,444,170 would be funded by Dormitory System Funds.

The **Wallace and Wilson Residence Halls – Life Cycle Replacement** project would replace the flooring in student rooms, upgrade corridor lighting, and paint the interior (see Attachment D for location). The work would take place during the summers of 2017 and 2018 in coordination with the Wallace and Wilson Residence Halls – Window Replacement project. The project budget of \$2,700,000 would be funded by Dormitory System Funds.

The **Wallace and Wilson Residence Halls – Window Replacement** project would remove and replace 1,280 windows (640 in Wallace and 640 in Wilson) with energy-efficient, insulated windows (see Attachment D for location). The work would take place during the summers of 2017 and 2018 in coordination with the Wallace and Wilson Residence Halls - Life Cycle Replacement project. The project budget of \$3,300,000 would be funded by Dormitory System Funds.

Details of the Projects:

Student Innovation Center

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|-----------------------------------------------------------------------------------------------------------------|---------------|-------------|---------------------|
| Feasibility Study (Site Evaluation) (Sasaki Associates; Watertown, MA) | \$ 77,600 | Dec. 2011 | Not Required* |
| Feasibility Study (Program) (Cannon Design; Chicago, IL) | 256,500 | Jan. 2012 | Not Required* |
| Board of Regents FY 2016 Capital Request | | Sept. 2014 | Approved |
| State Appropriations (FY 2017 – FY 2021) | 40,000,000 | July 2015 | Approved |
| Permission to Proceed with Project Planning | | Aug. 2015 | Approved |
| Consideration of Use of an Alternative Delivery Method | | Aug. 2015 | Approved |
| Initial Review and Consideration of Capital Project Evaluation Criteria | | Aug. 2015 | Received Report |
| Design Professional Selection (Substance Architecture; Des Moines / Kiernan Timberlake; Philadelphia, PA) | | Nov. 2015 | Not Required* |
| Design Professional Agreement (Schematic Design – Record Drawings) | 6,950,375 | Mar. 2016 | Not Required* |
| Construction Manager – Agent Selection (J.E. Dunn, Des Moines, IA) | | Apr. 2016 | Not Required* |
| Program Statement | | Sept. 2016 | Not Required* |
| Construction Manager – Agent Agreement (Pre-Construction – Record Documents) | 8,319,149 | Nov. 2016 | Not Required* |
| Schematic Design | | Dec. 2016 | Requested |
| Project Description and Budget | 84,000,000 | Dec. 2016 | Requested |
| Final Review and Consideration of Capital Project Evaluation Criteria | | Dec. 2016 | Receive Report |

*Approved by Executive Director, consistent with Board policy

The University lacks a large, collaborative facility that is cross-functional and interactive. Significant growth in enrollment has intensified the pressure for collaboration spaces. The Student Innovation Center (Center) would be a shared, campus-wide building and would provide use of specialized equipment, technology, and technical support staff necessary to encourage innovative and collaborative learning opportunities. As detailed in the building program below, the Center would include:

- Interactive spaces for large group gatherings, informal student collaboration, social activities, special events and performances, and a public interface for student innovation and outreach.
- Hacking & Making spaces for hands-on experimentation, fabrication, prototyping, documentation, design, testing, and assembly.
- Extra-curricular working spaces for teamwork, conferencing, classes, and short-term offices.
- Flexible spaces to accommodate both large-scale temporary projects and the unknown future demands of a constantly evolving innovation center.
- Administration spaces for staff who manage, supervise, provide technical expertise, and coordinate activities in the Center.

The design uses a “patchwork” approach to the organization of space throughout the building. Centrally located interaction zones on each level create an organizing “town hall” system, in which gathering spaces and building circulation overlap, and through which visitors may glimpse the range of activities occurring in the Center.

Visual access between spaces is a key feature of the physical space of the Center and involves visual connection between interior spaces, between floor levels, and between interior and exterior spaces. Visible evidence of the activities associated with innovative process would be a prominent feature of the facility, maximizing the user experience while maintaining desired separations for safety, security, functionality, and acoustics.

Flexible spaces in the building may be used for a range of events or activities. Adjacencies have been carefully considered to bolster flexibility, such as an auditorium with a stage that opens onto a special project floor for unusual displays or performances.

The following compares the spaces in the approved building program with those in the schematic design.

| | <u>Approved Building Program</u> | <u>Schematic Design</u> |
|-------------------------------|------------------------------------------|-----------------------------|
| Entrance and Lobby | 1,450 | 1,713 |
| Retail | 600 | 621 |
| Café | 1,800 | 1,405 |
| Auditorium | 4,500 | 3,981 |
| Flat Floor Multipurpose Space | 3,000 | 2,959 |
| Small Exhibition Space | 1,000 | 917 |

| | | | | |
|--------------------------------|------------|-----|------------|-----|
| Large Exhibition Space | 2,250 | | 2,440 | |
| Student Interaction | 10,000 | | 18,231 | |
| Fabrication and Assembly | 20,800 | | 20,199 | |
| Glass Blowing Studio | 2,020 | | 2,074 | |
| Project Production Suites | 4,800 | | 4,988 | |
| Media Production Suites | 2,350 | | 2,310 | |
| Demonstration Kitchen | 1,800 | | 1,490 | |
| Output Center (Printing) | 1,400 | | 1,309 | |
| Meeting Rooms | 9,800 | | 9,703 | |
| Student Study/Activities | 3,000 | | 2,002 | |
| Learning Spaces | 11,150 | | 9,920 | |
| Co-Working | 2,100 | | 1,620 | |
| Administration | 1,480 | | 1,312 | |
| Special Projects | 14,000 | | 10,146 | |
| Building Support | 1,050 | | 947 | |
| <hr/> | | | | |
| Total Net Assignable Space | 100,350 | nsf | 100,287 | nsf |
| Anticipated Gross Square Feet | 140,000 | gsf | 139,900 | gsf |
| Anticipated Net-to-Gross Ratio | 72 percent | | 72 percent | |

The building would be predominately clad in a high-performing glass façade that balances the aesthetic goals with environmental and performance goals. The east, south, and west elevations would be an arrangement of glass folds to manage solar heat gain while maximizing views into and out of the building to showcase student activities. Horizontal projections reduce the need for additional heat gain control. The north façade is mainly opaque and provides high insulation value to the building envelope. The main entrance doors are directly across from each other, providing a passageway through the middle of the building.

Project Budget

| | |
|-------------------------------|---------------|
| Construction | \$ 64,379,280 |
| Planning, Design & Management | 10,684,770 |
| Furniture & Equipment | 6,637,730 |
| Contingency | 2,298,220 |
| <hr/> | |
| Total | \$ 84,000,000 |

Source of Funds

| | |
|----------------------|---------------|
| State Appropriations | \$ 40,000,000 |
| Private Giving | 44,000,000 |
| <hr/> | |
| Total | \$ 84,000,000 |

It is anticipated that the design development and construction document phases would be completed by late Spring 2017; the project bid in Summer 2017, and construction substantially complete by the end of 2019. To accelerate the schedule, early bid packages may be issued.

Richardson Court Residence Halls – Bathroom Remodeling

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|-----------------------------------------------------------------------------------|---------------|-------------|---------------------|
| Permission to Proceed with Project Planning | | Feb. 2016 | Approved |
| Initial Review and Consideration of Capital Project Evaluation Criteria | | Feb, 2016 | Received Report |
| Consideration of Use of Construction Manager – Agent Delivery Method | | Feb. 2016 | Approved |
| Design Professional Selection (Haila Architecture, Ames) | | May 2016 | Not Required* |
| Construction Manager – Agent Selection (Story Construction, Ames) | | Aug. 2016 | Not Required* |
| Design Professional Agreement (Pre-Design through Construction Administration) | \$ 792,500 | Aug. 2016 | Not Required* |
| Construction Manager Services – Pre-Construction | 83,420 | Nov. 2016 | Not Required* |
| Project Description and Budget | 11,444,170 | Dec. 2016 | Requested |
| Final Review and Consideration of Capital Project Evaluation Criteria | | Dec. 2016 | Receive Report |

*Approved by Executive Director, consistent with Board policy

The Birch, Welch, Roberts, Barton, Lyon, and Freeman Residence Halls, located on the east side of campus in the Richardson Court residence complex, are popular student housing facilities due to their proximity to classes, the Iowa State Center, and the Lied Recreation Athletic Facility. The halls were constructed from 1914 through 1936. While they have received various upgrades over the years, the existing bathrooms have community showers that are not Americans with Disabilities Act (ADA) accessible, have little privacy, and are not energy efficient. This project would provide needed improvements as outlined in the executive summary of this memorandum.

Project Budget

| | |
|-------------------------------|----------------------|
| Construction | \$ 9,417,120 |
| Planning, Design & Management | 1,754,690 |
| Contingency | 272,360 |
| Total | \$ 11,444,170 |

Source of Funds: Dormitory System Funds

Wallace and Wilson Residence Halls – Life Cycle Replacement

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|--------------------------------|---------------|-------------|---------------------|
| Project Description and Budget | \$2,700,000 | Dec. 2016 | Requested |

Built in 1967, Wallace and Wilson Residence Halls house 1,140 students. The flooring in student rooms and paint throughout both buildings are in need of updating. Lighting has also reached the end of its life cycle. Updating the lighting, flooring, and painting would lower the overall energy consumption and improve the interior character of both buildings for students. .

Project Budget

| | |
|-------------------------------|--------------|
| Planning, Design & Management | \$ 2,340,000 |
| Construction | 121,000 |
| Contingency | 239,000 |
| <hr/> | |
| Total | \$ 2,700,000 |

Source of Funds: Dormitory System Funds

Wallace and Wilson Residence Halls – Window Replacement

Project Summary

| | <u>Amount</u> | <u>Date</u> | <u>Board Action</u> |
|--------------------------------|---------------|-------------|---------------------|
| Project Description and Budget | \$3,300,000 | Dec. 2016 | Requested |

The 49-year-old Wallace and Wilson Residence Halls have dorm room windows on ten floors of both buildings requiring significant maintenance as they are leak air and are not watertight. The windows have reached the end of their life cycle and would be replaced with energy-efficient, insulated windows. Replacing the windows would improve comfort for the students, lower the overall energy consumption, and improve the exterior of both buildings. ISU’s Facilities Planning & Management would be the Design Professional.

Project Budget

| | |
|-------------------------------|--------------|
| Construction | \$ 2,640,000 |
| Planning, Design & Management | 357,150 |
| Contingency | 302,850 |
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| Total | \$3,300,000 |

Source of Funds: Dormitory System Funds

Student Innovation 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: Completion of this project would reinforce Iowa State University's position as a strong partner working in tandem with corporations and employers. New students entering Iowa State University are accustomed to having team-based learning already a part of their K-12 experience. Employers recruit and hire students who exhibit the ability to think creatively and critically, work effectively in cross-disciplinary teams, and have strong communication skills. In the future, graduates would need to be able to work across continents and cultures. Campus-based and application-based experiential learning would provide a balanced approach to the integration of theory and skills with real-world application.

Other Alternatives Explored: Initial planning evaluated multiple sites on campus and a variety of building configurations in both the Site Capacity Study and the Planning Study that were completed in 2014. The site was selected given its proximity to undergraduate academic core classes and the limited number of available building sites in this area of campus.

Impact on Other Facilities and Square Footage: The project includes 139,900 gross square feet of new construction to be located south of Sweeney Hall on Bissell Road. The Nuclear Engineering Laboratory constructed in 1934 and the south portion of the original Sweeney Hall building (Old Sweeney) constructed in 1927 would be demolished to accommodate construction of the new facility.

Financial Resources for Construction Project: State Appropriations and Private Giving.

Financial Resources for Operations and Maintenance: The estimated operational and maintenance costs associated with the project are as follows and would be funded by general university funds:

| | |
|-------------------------------|--------------|
| Operations and Maintenance | \$ 479,275 |
| Utilities | 714,827 |
| Others (Grounds/Mail/EHS/DPS) | 119,919 |
| <hr/> | |
| Total | \$ 1,314,021 |

Richardson Court Residence Halls – Bathroom 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: The Birch, Welch, Roberts, Barton, Lyon, and Freeman Residence Halls located in the Richardson Court residence system are popular student housing facilities because of their location on campus, which aids with the student experience. These residence halls supply beds for 817 students.

Other Alternatives Explored: These residence halls were constructed from 1914 through 1936, but have been upgraded over the years. This upgrade improves the student experience by making the facilities more accessible and giving more privacy in the shower and toilet areas, while maintaining the close location to academic activities.

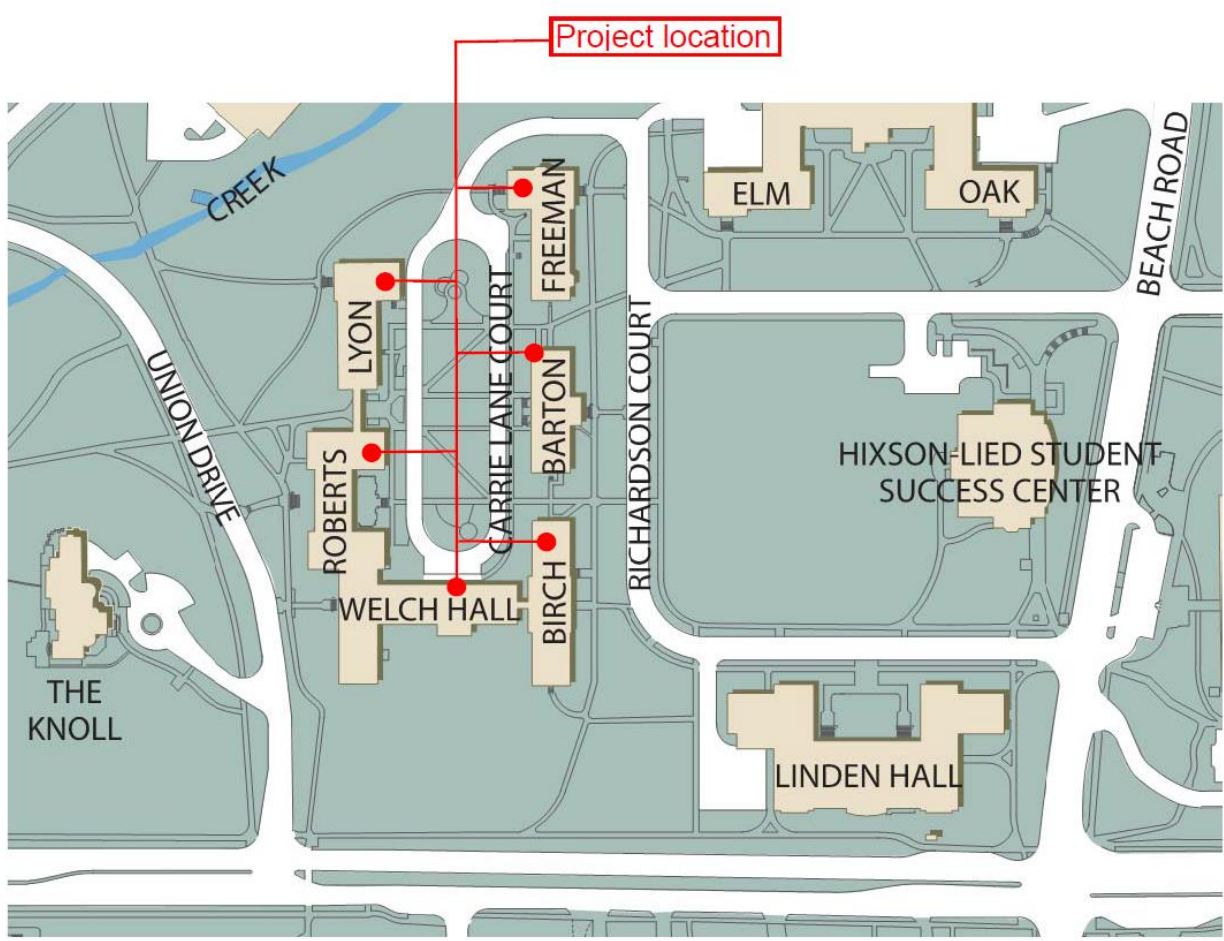
Impact on Other Facilities and Square Footage: Construction would occur during the summer while these residence halls are unoccupied to minimize impact to students.

Financial Resources for Construction Project: Department of Residence funds.

Financial Resources for Operations and Maintenance: Department of Residence funds.

External Forces Justifying Approval: The opening of the new Gregory L. Geoffroy Hall in early 2017 and other student housing opportunities create healthy competition for existing residence halls. To continue to compete for students, these older residence halls need upgrades like those proposed in this project. ISU's undergraduate enrollment increase of 40% over the last 10 years has also contributed to the demand for on-campus housing.

IOWA STATE UNIVERSITY
Richardson Court Residence Halls – Bathroom Remodeling Map



IOWA STATE UNIVERSITY
Wallace and Wilson Residence Halls – Life Cycle Replacement Map
and
Wallace and Wilson Residence Halls – Window Replacement Map

