

Contact: Sheila Doyle

**REGISTER OF UNIVERSITY OF IOWA**  
**CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS**

**Actions Requested:** Consider approval of:

1. Permission to proceed with project planning for the **Football Operations Facility** and the **Daum Hall – Restroom Renovation – Phase 1** projects, both major capital projects 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 (Attachments A and B);
  - b. Accept the Board Office recommendation that the projects meet the necessary criteria for Board consideration; and
  - c. Authorize permission to proceed with project planning, including the consultant selection process for the **Football Operations Facility**, and the selection of Rohrbach Associates, Iowa City, Iowa, to provide design services for the **Daum Hall – Restroom Renovation – Phase 1** project.
2. Schematic designs and project descriptions and budgets for the **Iowa Institute for Biomedical Discovery** (\$122,500,000), **Data Center** (\$33,628,000), and **University Hospitals and Clinics – Institute for Clinical and Translational Science** (\$9,120,000) projects, all 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 Attachments C, D and E);
  - b. Accept the Board Office recommendation that the projects meet the necessary criteria for Board consideration; and
  - c. Approve the schematic designs and project descriptions and budgets with the understanding that these approvals will constitute final Board approval and authorization to proceed with construction.
3. Ratification of revised project budget for the **Oakdale Campus – Electrical Generation Upgrade** project (\$7,898,000).

**Executive Summary:** The **Football Operations Facility** project would study facility improvements for the University's football program. These facilities include the Richard O. Jacobson football building, which houses the University's football coaches, trainers, and other staff, and the indoor practice bubble facility (see Attachment F for map).

The University's football coaching and support staffs have grown significantly since construction of the Jacobson building in 1995. The University reports that the facility can no longer adequately accommodate the football program's space needs for offices, locker rooms, strength and conditioning and athletic training areas, conference rooms, and equipment. The building improvements to be considered as part of the proposed study include a possible renovation of or an addition to the Jacobson Building, or the possible construction of a new football operations facility.

Football is the major source of revenue for the Department of Athletics, and the success of the program is critical to the overall financial health of the Department. Therefore, the University wishes to have improved football facilities that are comparable to its peer institutions.

The proposed study would also consider the relocation of the indoor practice bubble facility (constructed in 1985), since its existing condition and operational costs have raised questions regarding the remainder of its useful life. In addition, the study would examine the use of this site for additional parking or other functions in closer proximity to the University of Iowa Hospitals and Clinics, if the indoor practice facility were to be relocated.

The proposed study would include a comprehensive evaluation of options to provide solutions that ensure the best value for the football program. The University anticipates that the initial recommendations could result in projects costing in excess of \$10 million, which would be funded by gifts to the Athletic Department. The University will return to the Board for a report of the study results, its facility recommendations, and cost estimates.

The **Daum Hall – Restroom Renovation – Phase 1** project would renovate the restrooms on levels five through eight of Daum Residence Hall. The restrooms are original to the building's construction (1964) and are in need of repair. In response to student demand, the project would construct seven individual restrooms on each of the four levels, rather than one large restroom on each level for multiple student use.

The University requests approval of the selection of Rohrbach Associates, Iowa City, Iowa, to provide design services for the project. The University recommends the firm based on its successful work on previous restroom renovation projects in the University residence halls, and its extensive knowledge of the University's Residence System restroom standards.

The estimated project cost of \$1,993,000 would be funded by Residence System Funds. While Board policies do not require permission to proceed for projects with budgets of less than \$2 million, the University is requesting Board authorization since the current estimated cost is near the \$2 million threshold.

The **Iowa Institute for Biomedical Discovery** project (formerly Health Sciences Building C – Interdisciplinary Research Facility) would create an extension to the Health Sciences Academic/Biomedical Research Complex (the Medical Education Research Facility and Carver Biomedical Research Building) to house interdisciplinary research laboratory space to support the University's growth in extramural research funding, primarily in the Health Sciences (see Attachment G for map).

The additional space would enhance the University's competitiveness for anticipated private sector support and National Institutes of Health research grants. In addition, the facility is anticipated to support a biomedical research partnership between the Carver College of Medicine, private donors, the State of Iowa, and the federal government, to improve the health of all Iowans and strengthen the State of Iowa's competitiveness, as well as its economy. The University also plans to house the Fraternal Order of the Eagles National Diabetes Center in this facility.

The project budget of \$122.5 million would be funded by state appropriations (\$30 million received), federal grants, and the Carver College of Medicine gifts and earnings.

The **Data Center** project would construct a new computer data center at the Oakdale Campus to house and protect the computing and networking systems critical to the daily operations of University Information Technology Services and UIHC Health Care Information Systems. The proposed facility would replace the University's outdated and undersized data centers (located in Jessup Hall and the General Hospital) and provide additional space for research-computing servers.

Recent assessments of the University and UIHC data centers concluded that they are deficient in several critical infrastructure categories (architectural, electrical, mechanical, fire protection, and security); the University and UIHC are at risk of losing campus computing services due to these deficiencies. The data centers are also nearing capacity and soon will be unable to accommodate requests for new computing services. In addition, the collegiate-hosted servers across campus are housed in environments that lack the stringent heating, ventilation and air conditioning requirements for operation of the computer servers. Further, the Information Technology systems currently located in the Lindquist Center were at great risk during the June 2008 flooding.

The project budget of \$33,628,000 would be funded by the sale of revenue bonds, with debt service payments from the user organizations.

The **University Hospitals and Clinics – Institute for Clinical and Translational Science** project would develop clinical, research, administrative and support facilities in University Hospitals and the Carver College of Medicine Medical Research Facility to house and support the University's Institute for Clinical and Translational Science. The Institute is the overarching, academic structure for all clinical and translational research and training of the University's colleges and University Hospitals. The University has identified this research in the biomedical sciences as an area of great need, opportunity and future growth.

The Institute's functions will include clinical research programs, community programs (community-based participatory research), education and training in patient-focused research, research infrastructure (creating new research cores), biomedical informatics (data/knowledge management), and pediatrics.

The project would renovate a total of 40,000 gross square feet of space. This includes 31,000 gross square feet of space throughout University Hospitals (in the General Hospital and Boyd Tower), and 9,000 square feet of space in the Medical Research Facility. The renovations will provide space for Institute inpatient and outpatient research and treatment units, training and conference facilities, administrative, faculty and staff offices, and research staff workspace.

The centralized and consolidated location would facilitate faculty and staff interaction, and the location of research staff and facilities in close proximity to patient care functions would promote ease of access and use for patients, and enhance the opportunity for patient recruitment into funded studies.

The project budget of \$9,120,000 would be funded by University Hospitals Building Usage Funds and the College of Pharmacy.

The **Oakdale Campus – Electrical Generation Upgrade** project will install two new generators at the Oakdale Power Plant to provide electrical power to the Oakdale Campus. The generators will be capable of utilizing either natural gas (for back-up electrical power) or renewable biogas (for primary power), and would be sized to support the construction of the State Hygienic Laboratory and the planned construction of other buildings at the Oakdale Campus.

The revised budget of \$7,898,000, an increase of \$1,173,000, was approved by the Executive Director, in response to higher than anticipated construction bids, to allow award of the construction contract. The University attributes the high bids to national market forces resulting from recent hurricanes, materials price increases (particularly copper), and the local bidding climate with the additional construction work resulting from the summer flooding. The budget increase will be paid by Utility System Revenue Bond proceeds.

**Details of Projects:**

**Football Operations Facility**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Oct. 2008	Requested
Initial Review and Consideration of Capital Project Evaluation Criteria		Oct. 2008	Requested

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**Daum Hall – Restroom Renovation – Phase 1**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Oct. 2008	Requested
Initial Review and Consideration of Capital Project Evaluation Criteria		Oct. 2008	Requested
Architectural Selection (Rohrbach Associates, Iowa City, IA)			Not Required

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**Iowa Institute for Biomedical Discovery**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed with Project Planning		Feb. 2007	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		Feb. 2007	Approved
Architectural Selection (Rohrbach Associates, Iowa City, IA)		Feb. 2007	Approved
Program Statement		Oct. 2008	Not Required
Final Review and Consideration of Capital Project Evaluation Criteria		Oct. 2008	Requested
Schematic Design		Oct. 2008	Requested
Project Description and Total Budget	\$ 122,500,000	Oct. 2008	Requested

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The schematic design booklet is included with the Board's materials.

The schematic design includes nine levels to house the functions of the Institute. The subbasement includes mechanical/electrical areas and other building support functions, and a storage room for the Office of Animal Resources. The basement level includes the animal housing and small animal imaging areas. The majority of the lower level would house the large animal and human subject imaging area. The eastern portion of this level includes offices for both Animal Resources and the Institute for Biomedical Imaging.

The majority of the first level would house wet laboratories and offices for faculty researchers. The remainder of this level includes the administrative offices of the Institute, a coffee shop, and other building support functions. The remaining levels, two through six, would house additional wet laboratories and offices for faculty researchers. The University reports that levels five and six may be constructed initially as shell space for interior completion at a later date.

In addition, the project includes an enclosed passageway connecting the Institute with the Medical Education Research Facility to the west, a service tunnel connection to the Bowen Science Building loading dock area to the south, and minor modifications to the Bowen Science Building to accommodate loading dock activities.

The square footages in the schematic design are identical to the approved building program.

Detailed Building Program

Iowa Institute of Biomedical Discovery

Wet Laboratories/Offices	75,018	
Animal Housing	14,272	
Human/Large Animal Imaging	13,713	
Institute Office Areas	5,451	
Small Animal Imaging	5,368	
Office of Animal Resources	3,434	
Coffee Shop	1,813	
Storage	<u>397</u>	
Total Net Assignable Space		119,466 nsf
Total Gross Square Feet		203,925 gsf
Anticipated Net-to-Gross Ratio = 59 percent		

Bowen Science Building Modifications

Corridor Renovations	3,050	
Elevator/Garage Additions	1,600	
New Elevators/Stairs	648	
Skywalk	<u>600</u>	5,898 gsf
Passageway to Medical Education Research Facility		3,250 gsf
Bowen Science Building Service Tunnel		2,033 gsf

The University plans to receive construction bids in early 2010 and complete construction in late 2013.

Project Budget

Construction	\$ 103,600,000
Planning and Design	14,300,000
Contingencies	<u>4,600,000</u>
<b>TOTAL</b>	<b><u>\$ 122,500,000</u></b>

Source of Funds: State Appropriations, Federal Grants,  
and Carver College of Medicine Gifts and Earnings

**Data Center**

<u>Project Summary</u>			
	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Aug. 2007	Approved
Initial Review and Consideration of Capital Project Evaluation Criteria		Aug. 2007	Received Report
Approval to Use Construction Manager Program Statement		Sept. 2008	Approved
		Oct. 2008	Not Required
Final Review and Consideration of Capital Project Evaluation Criteria		Oct. 2008	Requested
Schematic Design		Oct. 2008	Requested
Project Description and Total Budget	\$ 33,628,000	Oct. 2008	Requested

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The schematic design booklet is included with the Board's materials.

The **Data Center** would consist of one level which would house two data halls (raised floor equipment areas), one for University Information Technology Services and one for UIHC Health Care Information Systems, along with mechanical/electrical and equipment rooms, operations centers, and office areas.

The schematic design includes a future south addition to the building (37,000 gross square feet) which would provide a 100 percent expansion of the data halls and mechanical/electrical areas to house individual research and collegiate servers currently located across campus. If the University chooses to proceed with this expansion, it would be presented for Board approval at a future date.

The square footages in the schematic design are identical to the approved building program.

Detailed Building Program

Mechanical/Electrical Areas		13,724	nsf
<u>UIHC Health Care Information Systems</u>			
Raised Floor Equipment Area	6,990		
Storage/Operations Center/Other	1,216		
Conference Room/Office/Workstations/Work Room	<u>978</u>	9,184	nsf
<u>University Information Technology Services</u>			
Raised Floor Equipment Area	4,720		
Storage/Operations Center/Other	1,216		
Conference Room/Office/Workstation	<u>850</u>	6,786	nsf
Fiber Hub		3,097	nsf
<u>Shared Administration/Support</u>			
Storage	500		
Restrooms	319		
Loading Dock	300		
Custodial	260		
Break Room	196		
Locker Room	144		
Other	100	<u>1,819</u>	nsf
Total Net Assignable Space		34,610	nsf
Total Gross Square Feet		46,723	gsf
Anticipated Net-to-Gross Ratio = 74 percent			

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The University plans to commence construction in fall 2009 for completion by fall 2011.

Project Budget

Construction	\$ 28,520,000
Planning and Design	3,732,000
Contingencies	<u>1,376,000</u>
<b>TOTAL</b>	<b><u>\$ 33,628,000</u></b>

Source of Funds: Revenue Bonds (with debt service payments from user organizations)

**University Hospitals and Clinics – Institute for Clinical and Translational Science**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Initial Review and Consideration of Capital Project Evaluation Criteria		Oct. 2007	Approved
Permission to Proceed		Oct. 2007	Approved
Program Statement		Aug. 2008	Not Required
Final Review and Consideration of Capital Project Evaluation Criteria		Oct. 2008	Requested
Schematic Design		Oct. 2008	Requested
Project Description and Total Budget	\$ 9,120,000	Oct. 2008	Requested

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The schematic drawings are included with the Board's materials.

The Institute for Clinical and Translational Science will include space in both University Hospitals and the Medical Research Facility. In University Hospitals, the Clinical Trials Unit is located in adjoining space on level 2 of the Boyd Tower and General Hospital. The Clinical Trials Unit includes an outpatient clinic with 16 exam rooms and associated support areas, a kitchen and dining facility, five inpatient rooms including a shielded inpatient room for electrophysiology research, six consultation rooms, a procedure room, infusion area with seven bays, analytical wet lab, patient entrance and waiting area with public restrooms, and a faculty and support staff office area with private and shared offices and workstations, conference room, and staff locker room. The administrative and staff office areas are located on level 4 of the General Hospital.

In the Medical Research Facility (MRF), the schematic design includes office areas for the Institute's informatics staff on level 1, additional administrative and staff offices on level 2, and clinical research storage space on level 5.

The square footages in the schematic design are identical to the approved building program.

Detailed Building Program

Clinical Research		
Clinical Research Unit (UIHC)	10,683	
Clinical Trials Unit (UIHC)	1,279	
Clinical Research Storage (MRF)	1,127	
Administrative Office Areas		
UIHC	7,601	
Medical Research Facility	2,981	
Informatics Offices and Workstations (MRF)	2,303	
Dietary Facilities (UIHC)	1,091	
Analytical Wet Lab (UIHC)	<u>877</u>	
Total Net Assignable Space	27,942	nsf
Anticipated Gross Square Feet	40,000	gsf
Anticipated Net-to-Gross Ratio = 70 percent		

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The University anticipates commencing construction in the winter of 2008 with an anticipated completion date of March 2010.

Project Budget

Construction	\$ 6,070,000
Equipment	1,500,000
Professional Fees	650,000
Planning and Supervision	300,000
Contingencies	<u>600,000</u>
TOTAL	<u>\$ 9,120,000</u>
Source of Funds: University Hospitals Building Usage Funds/ College of Pharmacy	

**Oakdale Campus – Electrical Generation Upgrade**

Project Summary

	<u>Amount</u>	<u>Date</u>	<u>Board Action</u>
Permission to Proceed		Dec. 2007	Approved
Project Description and Total Budget	\$ 6,725,000	June 2008	Requested
Construction Contract Award – Package G3 (Tricon General Construction)	3,774,274	Oct. 2008	Not Required
Revised Project Budget	7,898,000	Oct. 2008	Ratification

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Project Budget

	<u>Initial Budget June 2008</u>	<u>Revised Budget October 2008</u>
Construction	\$ 5,483,374	\$ 6,519,057
Planning and Design	875,050	933,700
Project Contingency	<u>366,576</u>	<u>445,243</u>
TOTAL	<u>\$ 6,725,000</u>	<u>\$ 7,898,000</u>

Source of Funds: Utility System Revenue Bonds

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## **Football Operations Facility**

### 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 Richard O. Jacobson Building, constructed in 1995, houses facilities for the football program at the University of Iowa. The lower level consists of team locker rooms, coaches' lockers, equipment room, and sports medicine/training area. The first level includes a reception area and strength and conditioning area. Adjacent to this area is the football office suite, which consists of coaches' offices, reception area, video/film area and meeting space. Since the construction of these facilities, the coaching and support staffs have grown significantly, especially in the areas of video/film analysis, recruiting evaluation, and research and correspondence. These facilities do not meet the current needs of the football program and are deficient in terms of adequate office space, technology needs, a weight room large enough to provide new training techniques of strength and conditioning, i.e., dynamic stretching, plyometrics, agility and speed development, and core strengthening. The training room no longer has the state-of-the-art modalities to assist in the prevention of injuries and rehabilitation following an injury to student athletes.

This project would evaluate the current needs of the football program and assess whether existing space is adequate to be remodeled to satisfy these needs or whether a new addition/building would be required. The existing indoor practice facility will also be evaluated as part of this study with respect to its current condition, based on maintenance requirements, energy consumption, relative location with respect to the football operations facility, and condition related to its age at nearly 25 years.

Other Alternatives Explored: In July 2007, the BOR approved a program for expansion of the Richard O. Jacobson Building. Part of this program consisted of enlarging the weight training and fitness area for the football program on level one. Also included was an expanded entry/gathering space for the facility. The proposed expansion would construct an addition to the west end of the Jacobson Building. This portion of the project, a project that included renovation and modernization of team and locker room space serving other UI sports programs, was put on hold due to the possibility of this project.

The results of this planning study and associated programming will be presented to the BOR.

Impact on Other Facilities and Square Footage: The project, should it include modernized indoor practice space, would result in the abandonment of the current indoor practice bubble facility.

Financial Resources for Construction Project: All project funding will be provided by Athletics Department gifts. The project cost will be determined as part of early project planning and through a determination of improvements that will best address current and long-term program needs.

Financial Resources for Operations and Maintenance:

The source of funds to cover the associated operating and maintenance costs will be provided by the Athletic Department. Actual costs will depend on the results of the planning study.

External Forces: Intercollegiate athletics is influenced by the actions of peer institutions competing for the best student-athletes from across Iowa and the nation. Many Big Ten Conference institutions have built or are building comparable facilities to assist in the recruitment, retention and performance of top student-athletes. This has become a shortcoming of the current Richard O. Jacobson facility and football office complex, due to significant changes in program size and training techniques over the past decade.

This project is critical for the Department of Intercollegiate Athletics in keeping its mission to provide the necessary resources, facilities and equipment up to date, in order for the student athlete to graduate from the University of Iowa while participating in broad-based championship caliber athletic competition.

**Daum Hall – Renovate Restrooms – Phase 1**

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 core values of the University include excellence, learning, community, diversity, integrity, respect and responsibility. Strategies to accomplish these core values include recruiting and retaining a student population, promoting effective learning environments and promoting a welcoming climate that enhances the education experience. The residence halls are an important factor in students' decisions to attend the University. University Housing's master plan includes renovation of residence hall restrooms as part of its long term renovation plans.

Other Alternatives Explored: Four restroom renovation options were explored. The selected option provides University Housing with the most flexibility in assigning and housing students and provides the potential to house men and women on the same floor.

Impact on Other Facilities and Square Footage: No space will be abandoned or demolished. One residence hall room (2 beds) will be eliminated on each floor in order to provide space for the renovation.

Financial Resources for Construction Project: University Housing capital funds from the annual operating budget will fund the project.

Financial Resources for Operations and Maintenance: The space is currently maintained by University Housing. Therefore, operating and maintenance funds already exist in the operating budget.

External Forces: Existing restrooms are not ADA compliant. One renovated restroom on each floor will meet ADA requirements.

## Iowa Institute for Biomedical Discovery

### 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 requires an increase in laboratory space and access to new core facilities in life sciences beyond the boundaries of individual colleges to recruit and retain exceptional researchers. This facility, located on the Health Sciences Campus, will provide a unique environment where scientists from different colleges and with common interests will collaborate to explore basic scientific questions in the area of life sciences. Critical area of research interest will include cognitive and molecular neurosciences, cardiovascular research, imaging technologies, bioinformatics, bio-complexity and bio-defense. These thematic programs will include a spectrum of research and treatment to aging, obesity and women's health issues. Patient-oriented research under the umbrella of the University of Iowa Institute for Clinical and Translational Science will provide the push for "bench to bedside" research which is a prominent focus of the National Institute of Health roadmap as it redirects a larger portion of its funding to support translational research. As recently announced, the facility will host the Fraternal Order of Eagles Diabetes Center, with cutting edge exploration of a cure for this disease.

Other Alternatives Explored: This project will complete the medical education/research complex identified in the 1996 Health Sciences Campus master plan prepared by Payette Associates. This facility will include expanded core research modalities that are currently housed in the Carver Biomedical Research Building (CBRB) as well as new core research functions. The complex will make available an array of flexible research spaces, organized to assist in eliminating unnecessary duplication of equipment and staff. Since the facility will complete the Health Sciences Campus tunnel system, other facilities, Bowen Science Building (BSB), Eckstein Medical Research Building (EMRB) and Medical Laboratories (ML) researchers will have enclosed access to all core research modalities, which will help to increase efficiency and maximize cooperation amongst the various health-related research entities on the Health Science Campus.

Impact on Other Facilities and Square Footage: The Animal Resources administrative office relocated from the Fourth Floor of the Medical Laboratories allowing this space to be reprogrammed.

Financial Resources for Construction Project: This project will be funded through state appropriations, federal grants, Carver College of Medicine gifts and earnings.

Financial Resources for Operations and Maintenance: The anticipated source of funds to cover operating and maintenance costs for the facility will be General Education Fund Facilities & Administration reimbursements at an anticipated annual cost of \$22 per square foot.

External Forces: The new facility will provide the much needed interdisciplinary research laboratory spaces to support the growth in extramural research funding received by the University, primarily in the Health Sciences. Additional research laboratory space will enhance the University's competitiveness for anticipated private sector support and research grants from the National Institutes of Health and provide the needed generic and wet laboratories and appropriate support and core facilities needed to support an investigative model that allows interdisciplinary research teams to focus on specific research problems. The facility will also address current and future needs for research among the Health Sciences colleges and other University colleges.

As part of the proposed IIBD project, the University has studied the potential of extending the sub-grade vivarium space into the courtyard created by the three building complex. This space, which would be beneath the landscaped courtyard would provide an additional 35,000 gross square feet of vivarium space. Any further consideration of this potential and separate project would be presented to the Board of Regents at a later date.

## **Data 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: Information Technology is vital to the University of Iowa. It extends broadly across the clinical, academic, research, administrative and outreach aspects of the campus for virtually every UI student, faculty and staff member. Investments in IT are strategic for the University of Iowa and directly support many of the goals in *The Iowa Promise*, The University of Iowa's Strategic Plan for 2005-2010. Most day-to-day campus and health care activities involve the use of IT in some form. This critical dependency on Information Technology requires reliable, sustainable, and available computer systems and networks. The proposed data center is the foundation for providing IT services with those required characteristics.

Recent assessments of the existing University and UIHC data centers concluded that they are deficient in several critical infrastructure categories (architectural, electrical, mechanical, fire protection, and physical security levels); the University and UIHC are at risk of losing campus computing services due to these deficiencies. Additionally, this summer as the University battled against the flood of the Iowa River, the potential and severe risk related to data center proximity to the river was made evident. The data centers are also nearing capacity and soon will be unable to accommodate requests for new computing services. In addition, the collegiate-hosted servers across campus are housed in environments that lack the stringent electrical, ventilation and air conditioning requirements for operation of the computer servers.

Upgrades needed to meet minimal requirements for network and computing equipment within those facilities have been explored. However, most of the improvements required to meet minimum standards are impossible or prohibitively expensive due to the limitations of the existing Jessup Hall and General Hospital buildings. Both buildings are old, and were not designed to support modern data centers.

They cannot be expanded adequately in terms of space, electrical requirements or cooling needs.

Leased data center space from private companies was examined as an alternative to building a University-owned data center. The University of Iowa commissioned a consultant to evaluate a customized proposal from a private company that included rates that were about half the market rates for other similar facilities. Even at these relatively low rates, the report estimated a 5-7 year break-even period when comparing leased facilities to constructing new, meaning that after 5-7 years a University- built facility is a better financial option. Since the life of a new data center is estimated at 20 years or more, building and operating a University facility is the preferred option. An on-campus facility also saves considerable operating expenses in terms of data network connectivity since the University of Iowa does not need to procure connectivity off campus to access the facility.

Other Alternatives Explored: Upgrades needed to meet minimal requirements for the existing network and computing equipment within those facilities have been explored. However, most of the improvements required to meet minimum standards are impossible or prohibitively expensive due to the limitations of the existing Jessup Hall and General Hospital buildings. Both buildings are old, and were not designed to support data centers. They cannot be expanded adequately in terms of space, electrical requirements or cooling needs.

Leased data center space from private companies was examined as an alternative to building a University-owned data center. The University commissioned a consultant to evaluate a customized proposal from a private company that included rates that were about half the market rates for other similar facilities. Even at these relatively low rates, the report estimated a 5-7 year break-even period when comparing leased facilities to constructing new, meaning that after 5-7 years a University-built facility is a better financial option. Since the life of a new data center facility is estimated at 20 years or more, building and operating a University facility is the preferred option. An on-campus facility also saves considerable operating expenses in terms of data network connectivity since the University does not need to procure connectivity off campus to access the facility.

Impact on Other Facilities and Square Footage: Relocation of the academic and administrative data center from Jessup Hall would result in the transfer of 6,300 square feet to other University purposes. This space in the lower level of Jessup Hall will be studied for reprogramming to serve University objectives. The General Hospital space would likely be abandoned as the space is functionally and operationally obsolete. Some collegiate space may also be available for other use, as isolated campus-wide departmental server space would be consolidated to the new facility.

Financial Resources for Construction Project: University of Iowa infrastructure funding, UIHC infrastructure funding, revenue bonds issued through the Telecom Enterprise / UIHC/ or another appropriate enterprise. Debt service will be paid by user organizations.

Financial Resources for Operations and Maintenance: Estimated annual operating and maintenance costs for the Data Center are estimated to be \$3,000,000 and is anticipated to be funded by ITS.

External Forces: There is heightened awareness to protect information technology resources in response to recent events, such as the fire in UNI's Gilchrist Hall, the break-in of UI's Seashore Hall and the 2006 tornado and 2008 flood on the University of Iowa campus. Current best practices are to provide secure, "hardened" facilities to house mission-critical computing and network equipment. Neither the ITS or HCIS data centers can realistically be retrofitted into a "hardened" facility.

Some research grants are dependent on having modern-day data centers to house computing equipment. The University will be unable to secure those grants without an appropriate data server facility.

## University Hospitals and Clinics – Institute for Clinical and Translational Science

### 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 facilities to be developed by these projects will greatly assist the UIHC in meeting a major component of its tripartite mission, that of providing a base for research to improve healthcare. These facilities will serve as the hub for the UI Institute for Clinical and Translational Science's endeavors to undertake clinical and translational research. UIHC's other two missions of offering a broad spectrum of clinical services to patients and serving as the primary teaching hospital for the University will also be enhanced through location of the Institute's facilities within hospital and adjoining Carver College of Medicine space. The project also supports several of the UIHC's Strategic Plan goals, most notably in collaboration with the Carver College of Medicine to enhance and expand existing scientific efforts in health sciences research related to care delivery and evidenced-based practice and to strengthen the medical center's overall clinical research base.

In addition, major goals of the University of Iowa's Strategic Plan will be supported and strengthened through development of the Institute and its facilities as described below.

**GOAL: To cultivate excellent graduate and professional programs, and to advance the research and scholarly enterprise.**

The Institute will train highly motivated clinical research scholars for innovative careers in patient-focused research. The training programs will provide a diverse and comprehensive curriculum across a spectrum of clinical research fields and abundant opportunities for close supervision by mentors from the Colleges of Dentistry, Nursing, Pharmacy, Public Health, Engineering, Liberal Arts, and the Carver College of Medicine. Trainees will be selected from a variety of clinical disciplines, including those traditionally underrepresented in clinical research such as radiology, pediatrics, clinical psychology, surgical sub-specialties, anesthesiology, and pharmacy. Training programs will also reach health care providers in the community and nurse research coordinators.

**GOAL: To promote excellence in education by increasing the diversity of the faculty, staff, and students.**

The Institute will take every measure to create an environment that respects and promotes difference. Within each key function of the Institute evaluation and tracking, metrics will be partially based on the Institute's success in including underrepresented individuals. Although promoting diversity is an essential aspect of all key functions, it will be especially pertinent to the Research Education, Training, and Career Development Function. Trainees and mentors alike will be required to attend an Institute retreat on mentoring and health disparities.

**GOAL: To strengthen the University's intellectual and community vitality.**

A major focus of the Institute will be to stimulate new interdisciplinary research programs and to consolidate and improve the University's research infrastructure. Within the University, the Institute will serve to bring together existing programs in the major domains of clinical research and their leaders. A major role of the Institute is to facilitate the transfer of knowledge across these domains and ultimately to the community.

**GOAL: To broaden the University's service mission to include stronger partnerships with public constituencies.**

The Institute plans to implement novel programs for partnering with communities that will capitalize on a strong tradition of community-based research at The University of Iowa. The Institute will also capitalize on a special relationship between the University and the people of Iowa. As the only academic medical center in a largely rural state of 3,000,000, the University has built a number of clinical and educational outreach programs that have touched most Iowa families.

The Institute's community engagement activities will be driven by accepted principles of community-based participatory research and will create and nurture a wide range of research. The long-term goals of these activities are to 1) decrease disparities in clinical research participation by underserved populations, 2) enhance community trust in clinical and translational research, 3) identify the research priorities and needs of patients, 4) engage community providers in meaningful ways in conducting clinical research, and 5) facilitate recruitment of research participants from the community.

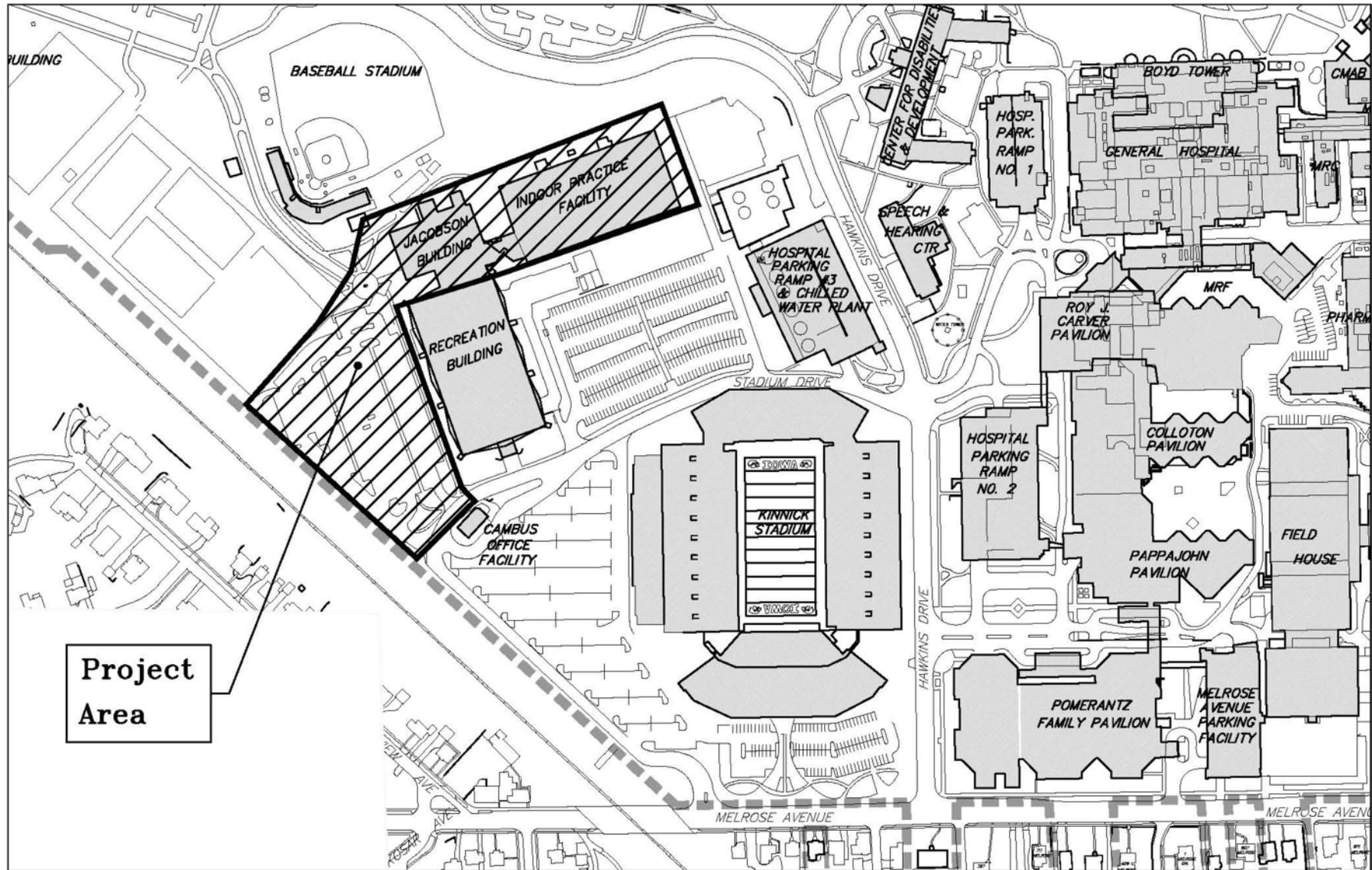
Other Alternatives Explored: As previously mentioned, the most significant initiative of the "NIH Roadmap for Medical Discovery" is the establishment of Clinical and Translational Science Awards (CTSA's). These grants are awarded to select research intensive institutions deemed meritorious by the NIH. To be considered for the award the applicant institutions must pledge significant resources, both in terms of finances and space, for creation of an academic home for clinical and translational research. To be competitive for this award the University of Iowa had to have an established plan in place to dedicate space and resources to the new Institute. This space needed to be large enough to accommodate inpatient and outpatient research facilities, the Institute faculty and staff offices and conference/classrooms. For the Institute to operate effectively, it is necessary for the dedicated space to be located within the UIHC and adjacent health science campus buildings. The space must be conveniently located in relationship to UIHC's outpatient clinics to allow for easy access by patients who may also be participating in clinical studies being undertaken in Institute facilities. The only viable option is to utilize space within the UIHC, which must be renovated to meet the Institute's functional requirements. Without this dedicated space the University of Iowa would not have met the NIH's requirements for CTSA designation, would not have been eligible for CTSA grant funding and could have lost a significant amount of its other NIH funding for clinical and translational science. Last year the University of Iowa received nearly \$186 million in NIH funded grants. Failure to achieve CTSA designation would have resulted in the University of Iowa losing its status as a premier U.S. research institute in the biomedical sciences.

Impact on Other Facilities and Square Footage: No space will be abandoned. On completion of this project approximately ninety-eight hundred gross square feet of space in several locations on level three of General Hospital that are now assigned to Institute functions will be reassigned for use in meeting other UIHC space needs.

Financial Resources for Construction Project: The projects will be funded through University Hospitals Building Usage Funds acquired from depreciation allowances of third parties underwriting the cost of patient care plus hospital net earnings from paying patients. No state capital appropriated dollars will be involved.

Financial Resources for Operations and Maintenance: The source of funds to cover the operating and maintenance costs will be indirect cost reimbursements received from the National Institutes of Health and other grant funding entities such as National Science Foundation, Center for Disease Control and Prevention, Health Resources and Services Administration, and private biomedical companies for the indirect costs associated with use of Institute facilities for funded clinical studies.

External Forces: As described above, the National Institutes of Health (NIH) is engaged in a series of initiatives, collectively known as the “NIH Roadmap for Medical Research” that promote clinical and translational investigation. One of the most prominent initiatives is the Clinical and Translational Science Award (CTSA) program. The goal of this program is to transform the local, regional and national environment for clinical and translational science, thereby increasing the efficiency and speed of clinical and translational research. This goal is to be accomplished through the creation of an academic home for all clinical and translational science on campuses heavily engaged in NIH funded clinical and translational research. The CTSA program is providing significant funds to awardees to aid in the establishment of these academic homes, such as the University of Iowa’s Institute for Clinical and Translational Science.

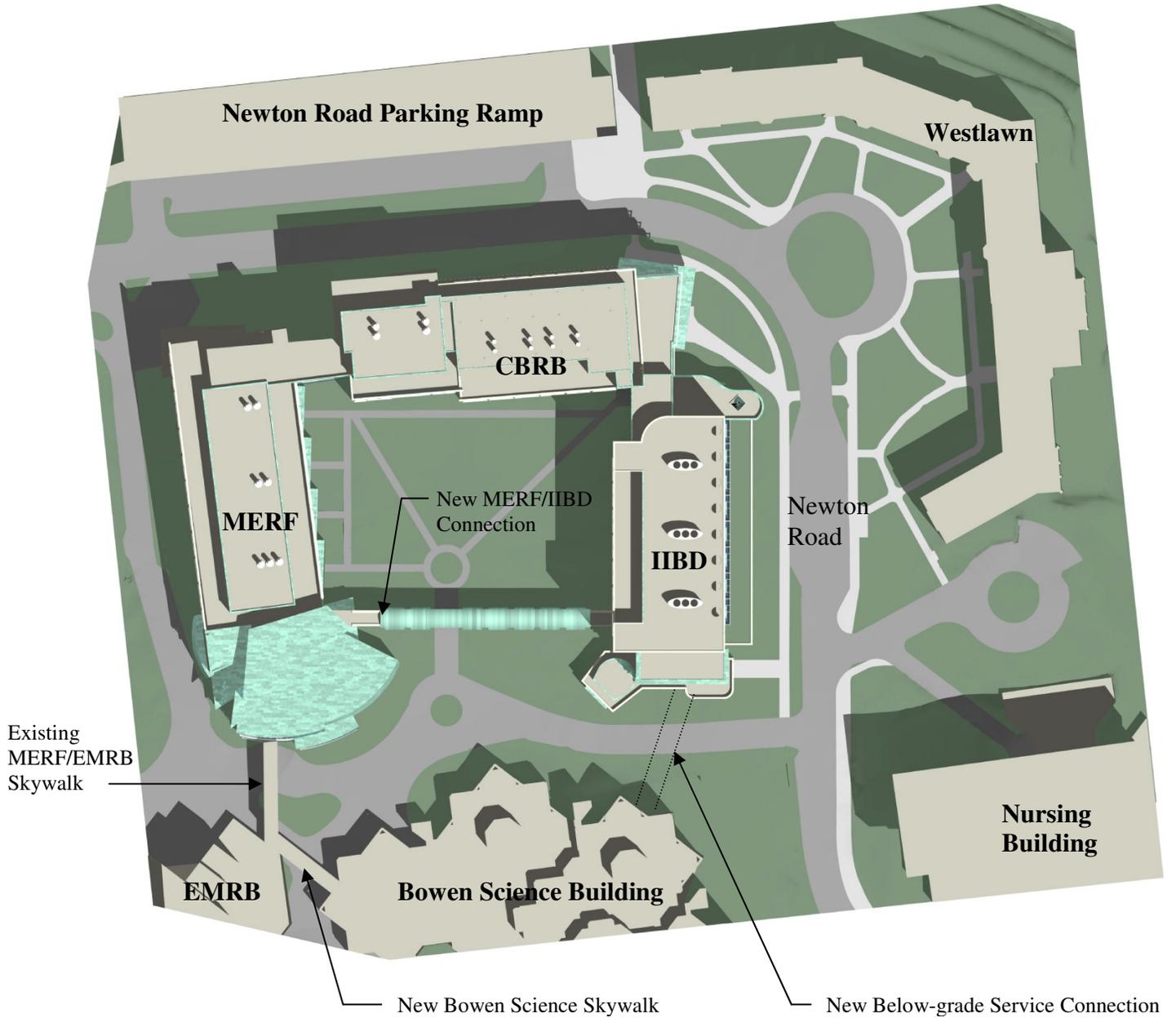


**THE UNIVERSITY OF IOWA**  
 Plotted: Oct. 10, 2008  
 HJB-new.dwg

**Legend**  
 - - - University Property Line

**LOCATION MAP**  
**Football Operations Facility**

**N**  
  
 Scale: 1" = 300'



**Iowa Institute for Biomedical Discovery, IBD**

Schematic Design  
October 2008

Rohrbach Associates PC Gwathmey Siegel & Associates Payette