

CAPITAL PROJECTS DETAIL

230 University of North Dakota

Version: 2011-R03-00230

Date: 01/13/2011

Time: 12:00:01

Capital Project

Small-Medium Projects

	Request/Optional	Recommendation
Total Project Cost	5,953,000	0
General Fund	5,953,000	0
Federal Funds	0	0
Special Funds	0	0
Bonding	0	0

Is this a multiennium project? No No of Biens: 1 Est. Costs 5,953,000

Future Increased Costs Associated with Project Approval

	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0	General Fund	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0
Special Lines	0	0	0	Total	0	0	0
Total	0	0	0				

Project Specifics and Justification

Gillette Hall Renovation - \$1,000,000 - The Education Building and Gillette Hall are located adjacent to each other near the center of campus and provide space for both the College of Education and Human Development and the College of Arts and Science. To better facilitate interaction between faculty and students, an addition to the Education Building will link both buildings together on three floors, subsequently complementing both the function and utility of both structures. Construction of the addition will result in the loss of a number of exterior windows which serve office space within Gillette Hall. Because of the direct relationship between natural light, productivity, and well being; restoring natural lighting to the office spaces is a priority for UND.

In addition to window restoration, Gillette Hall has a significant deferred maintenance liability visible in wall coverings, flooring, lighting, and ceiling finishes. This project will renew the existing surfaces and provide energy efficient lighting throughout the building. In addition, a comprehensive space evaluation will suggest what changes in configuration might best suit this building into the future, enhancing its connection to the Education Building and overall functional efficiency.

Hughes Fine Arts Center Renovation - \$763,000 - As one of the most unique and eclectic building designs on the UND campus, Hughes Fine Arts Center provides an inspirational background for development of the fine arts in visual and music media. Originally constructed in the early 1970s, it retains a mechanical and architectural design which does not fully meet the needs of a modern classroom and studio facility. Mechanical systems were originally developed to provide an environment similar to conventional classroom space and occupancy. In contrast, musical instruments prefer closely regulated temperature and humidity in order to control the tone and quality of their wood-based construction. Finding harmony (no pun intended) between the two needs is beyond the capacity of existing systems.

In addition to the aforementioned mechanical shortfalls, this 40 year old building is due for a significant investment in deferred maintenance to refresh wall finishes, flooring, and other sundry interior surfaces. When combined with the appropriate mechanical system, it will serve the needs of fine art studio and class room function for the extended future, supporting accreditation needs and continued excellence in education.

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Starcher Hall Mechanical and Electrical Modernization - \$990,000 - Starcher Hall is the basic life Sciences building on the University of North Dakota (UND) campus. It was designed in 1979 and suffers fundamental infrastructure problems related to HVAC and electrical supply. Specific aims of the project will include modernization of the building HVAC and electrical infrastructure associated with research laboratories and the animal care facility. The HVAC in the animal care facility (Center for Biomedical Research II) will be upgraded to provide enhanced control of temperature and air exchange in individual rooms. All research laboratories and shared research facilities in Starcher Hall will have sufficient electrical power installed for modern research in the Life Sciences. A backup generator will also be provided to protect animal care and research facilities in the event of an unexpected electrical failure. Updating the teaching infrastructure in the laboratories will better accommodate new degree programs and ongoing growth in the number of pre-health majors.

Although this project will not correct all the mechanical and electrical shortcomings, it will establish a modern infrastructure from which future projects can grow. Virtually all of the investment will be a dollar-for-dollar reduction in deferred maintenance, extending the functionality of this building well into the future.

Neuroscience Building Tunnel and Link - \$600,000 - During its original planning stage, the Neuroscience Building was envisioned with a connecting link to the existing School of Medicine as a means to facilitate the timely interaction of research faculty and transport of lab animals. Construction cost restraints prevented inclusion of a below-grade tunnel which would have linked the Neuroscience Building to the existing tunnel between the Biomedical Research Center (animal quarters) and the School of Medicine. Although the buildings are in relative proximity to each other, the lack of a physical connection creates a concern for the safe transport of research animals as well as the convenient flow of personnel and the subsequent dialogue that interaction creates.

This project will construct the below grade link in the location originally proposed and accommodated for within both buildings. The link will be extraordinarily low in maintenance and utility costs, and will actually serve to reduce both as it greatly reduces the amount of outdoor pedestrian traffic which enters the building, and subsequently reduce the housekeeping and utility needs associated with muddy boots and winter air.

School of Medicine and Health Sciences Classroom Renovation - \$750,000 - The SMHS is a world leader in effective teaching methods for the medical arts. The curricula is developed around a carefully balanced combination of effective classroom education and clinical practice which places the student in a thought provoking and effective learning environment. This type of hands-on training coupled with Socratic (traditional) teaching methods places unique and changing demands upon classroom configuration and technology.

Changing learning technologies and its subsequent application to the classroom requires a routine evaluation of size and configuration. To maintain its position as a major provider of health care professionals for North Dakota, the SMHS must modernize its classroom inventory in order to keep pace with current state-of-the-art medical training. This project will have a significant impact on the current deferred maintenance liability within the SMHS, and compliment the proposed addition which is a high priority for the SBHE.

There are five classrooms that need to be renovated. These classrooms were built in 1992 and total 550 seats. These classrooms are not designed for use of laptops and other technologies. Cabling needs to be placed in the flooring to allow for power to each seat. New seating is necessary to allow the students to use their laptops and make use of the new instructions technologies.

Facilities Mechanical and Electrical Upgrades - \$950,000 - UND continues to improve the basic mechanical and electrical systems throughout the campus in order to meet the changing needs of research and education. Although significant advancements have been made over the past 15 years, additional work can be accomplished, providing improved reliability and efficiency.

Continued improvements to the university-owned high voltage distribution system will ensure redundant electrical service critical to research endeavors, as well as improved efficiency by increasing distribution voltage levels throughout campus. A broad number of sundry mechanical improvements will also result in cost savings by retiring existing, inefficient HVAC equipment in a number of buildings.

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Chester Fritz Library Renovations - \$900,000 - Serving as the largest library in the region, the Chester Fritz Library continues to serve as an integral part of graduate and undergraduate education at UND. More than a simple repository for books, the CFA is a central feature in the campus learning infrastructure where both students and faculty tap the extensive inventory of materials both on-line and on-shelf. To further enhance this experience, UND proposes the creation of a “learning commons” within the library that will convert existing space into areas which better exploit the extensive resources available. This investment will have a direct effect on the quality of learning at UND for the extended future.

In addition to the above mentioned renovation, this project will also restore window efficiency to a like-new state, and refurbish the interior finishes as needed. Both will result in a substantial reduction in deferred maintenance and greatly improve the learning and research environment within the library.

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Capital Project			
University Town Home Apartments			
	Total Project Cost	Request/Optional	Recommendation
		5,000,000	5,000,000
	General Fund	0	0
	Federal Funds	0	0
	Special Funds	5,000,000	5,000,000
	Bonding	0	0

Is this a multiennium project? No No of Biens: 1 Est. Costs 5,000,000

Future Increased Costs Associated with Project Approval								
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	104,000	110,240	117,406	General Fund	0	0	0	
Equipment > \$5,000	0	10,000	10,650	Federal Funds	0	0	0	
IT Equipment > \$5,000	0	1,500	1,597	Special Funds	104,000	121,740	129,653	
Special Lines	0	0	0	Total	104,000	121,740	129,653	
Total	104,000	121,740	129,653					

Project Specifics and Justification

Note: Anticipated funding source for this project is the sale of revenue bonds. UND subsequently requests that permission to do so be granted and further included within the Governor's budget as a request for the legislature during its 2011 session. Construction of the Townhomes will result in the demolition of the existing West Green II complex, a series of obsolete, multifamily units. Total costs for demolition - \$75,000 which will be brought forward to the SBHE as a separate project not requiring legislative authorization.

- Project Description: Construction of new townhome style apartments on UND property in the general area of the existing housing complex. Project includes the construction of the apartments, providing those appliances and other sundry appurtenance typical of local rental units, and all landscaping and infrastructure work required to occupy the facilities.
- Total Project Cost
 - o Construction (including all related costs): \$5,000,000
 - o Equipment (and sundry furniture): Included with construction
 - o Total project costs: \$5,000,000
- Estimate completed by: Housing/Dining master plan consultants in coordination with Campus Capital Projects and Planning.
- Source of Funding: Revenue bond sales.
- Deferred Maintenance Reductions: \$464,560
- Estimated Increase in Operating Costs: No increase after demolition is complete.
- Ranking (scale of 1-10 where 1 is the least) for SBHE 902.1 -3.b prioritization:
 - o Life, Health, Safety: 3
 - o Comply with Law or Code: 5
 - o Preserve Current Assets: 1
 - o Strategic Investment: 10

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Capital Project			
Health Sciences Facility			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	28,890,000	0
	Federal Funds	28,890,000	0
	Special Funds	0	0
	Bonding	0	0

Is this a multiennium project? No No of Biens: 1 Est. Costs 28,890,000

Future Increased Costs Associated with Project Approval							
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	99,275	105,232	112,072	FTE	0.00	0.00	0.00
Operating Expenses	286,165	303,334	323,051	General Fund	385,440	408,566	435,123
Equipment > \$5,000	0	150,000	159,750	Federal Funds	0	0	0
IT Equipment > \$5,000	0	75,000	79,875	Special Funds	0	225,000	239,625
Special Lines	0	0	0	Total	385,440	633,566	674,748
Total	385,440	633,566	674,748				

Project Specifics and Justification

The Science of Synergy

The University of North Dakota School of Medicine and Health Sciences (SMHS) facility is one of the largest building complexes on campus. Space for research, education, and community service is all contained within a group of buildings that are linked together or built in close proximity to each other:

- 1952 construction. The original St. Michaels hospital which later became a part of the United (now Altru) Hospital system. The facility has been partially renovated over the past 24 years to include educational labs and classrooms, administrative space, and a small amount of dedicated research space.
- 1995 James Research addition. The first large addition which provides a large number of research labs and specialized ventilation equipment for that purpose. Lower levels contain instructional space for medical science students including anatomy and other related services.
- 1996 Wold Biomedical Learning Resource Center. This additional space is used primarily for learning resources (library) materials in addition to classrooms and group discussion rooms.
- 1999 Biomedical Research Center. This stand-alone facility is linked by underground tunnel to the center facility. It operates as a vivarium (animal quarters) for small mammals that are used for specific research within the SMHS and elsewhere on campus.
- 2001 Family Practice Center and Clinical Education Center. Constructed adjacent to the UND Bookstore, this functionally designed clinic is one of the most modern in the area, and provides space for clinical operations that serve the region as well as clinical education classrooms and observation rooms designed specifically for health care training. This facility is located in close proximity to the SMHS campus.
- 2005/2006 Neuroscience Research Facility. This ultra modern lab space was constructed using federal grant funds and is designed specifically for neuroscience and other types of research. Lab space is strategically located within the building to encourage interaction and communication between research professionals. This interaction is critical for expanded learning and discovery within a research environment.
- 2009/2010 Human Simulator Facility. This ultra modern demonstration space has been constructed as an addition to the Family Practice and Clinical Education Center. It provides a platform for the most realistic form of simulated emergency and traditional care using state of the art robotic patients. The facility is currently the only one scheduled to operate in North Dakota, and will provide learning experiences to both students and practicing professionals.

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The facilities and spaces indicated above describe a large and complex system that brings an extraordinary number of health care professionals, students, researchers, and administrators into close proximity *by design*. This community of learning and research creates an exciting environment of shared learning and exploration that is amplified by daily interactions. The process of developing a large cohesive group of individuals where the total potential creative thought becomes greater than the sum of all the individuals together is defined as *synergy*.

By developing the SMHS campus with tight groupings of buildings which facilitate easy interaction between faculty, students, and research professionals it has been possible to create the synergies that lead to breakthroughs that have made the SMHS the success it is today. The examples are numerous, including the basic methods of medical education, the celebrated research, and the recognition of UND-SMHS as the leader in Rural Health Care.

Encouraging More Success

Growth of the SMHS facility complex has not kept up with demand. Significant investments in infrastructure are consumed by research and educational needs almost as soon as they are completed. Available space within the facility remains at a premium, with an almost critical shortfall of functional support area for both education and research. In addition, key departments remain off site are unable to share resources as a result of their remote location. In addition, certain departmental locations within the facility are not conducive to the departmental mission because of limitations on floor size or other factors that create fragmentation and dispersal of personnel.

To correct these limitations, the SMHS has worked closely with Campus Facilities Planning to evaluate current space assignments and condition, make determinations as to new space requirements, and subsequently design a solution that undertakes a process of renovation, new construction, or both. From that study, the following issues were identified as needing space reassignment or relocation:

- Rural Health. Currently assigned space within the existing 1952 construction, this department is unable to develop efficiently because of a lack of floor space.
- Clinical Lab Sciences. 40% of North Dakota's clinical laboratory scientists are graduates of the SMHS CLS Certification, Bachelors, or Masters program. Existing space is both inadequate and dated, but lacks the basic infrastructure which would allow for any type of efficient expansion or renovation.
- Physicians Assistant Program. 81% of North Dakota's Physician Assistants have graduated from the SMHS Masters program. Currently space assignments are fragmented and ill suited for the program content, and desperately needs newer, more functional space to maintain this important venture.
- Physical Therapy. Fully 84% of North Dakota's Physical Therapists are graduates of the SMHS. The current space has remained unchanged for over twenty years and is awkwardly situated within the existing facility with absolutely no opportunities for expansion or renovation without a significant and detrimental effect on the program.
- Occupational Therapy. 83% of North Dakota's Occupational Therapists are SMHS graduates, yet they obtain most of their training in outdated sports facilities that are distant from the SMHS central building. Demands for space within the sports complex has put enormous pressure on the Occupational Therapy department to relocate to more appropriate space.
- Sports Medicine. One of the fastest growing and most popular medical professions is currently housed in an abandoned locker room, which is located approximately ¼ mile from the main campus facility.

After careful evaluation, the most efficient means of correcting the space inadequacies is to construct new functionality-specific space in close proximity to the existing SMHS campus, as demonstrated by the success of the previous projects. To do so will require the placement of a 132,000 square foot, four story building on what is now the large parking lot just south of the Biomedical Learning Resource Center and attached to the south wing of the original 1952 construction. This ambitious project will allow for the centralized location of the departments identified above in a facility which allows the optimum amount of interaction and participation. In addition, linking this facility to the existing original building will improve pedestrian traffic flow throughout the campus by establishing a nearby link to University Avenue.

Space made available by the relocation of SMHS departments within the existing SMHS facility will allow for the needed growth in support space and research areas. Space made available outside of the SMHS facility is currently in high demand by departments associated with those buildings and as a result will resolve additional space allocation issues. Parking spaces consumed by the new construction have been compensated for by the new parking structure located less than 200 feet from the site of the proposed Allied Health facility.

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The combined enrollment of the allied health professional program currently exceeds 500 students, with demand for substantially more. Current space limitations place constraints on program advancement, disable the opportunities for synergistic development, and effectively reduce the quality of education. Construction of the Allied Health Facility will not only enhance recruitment of qualified staff and faculty, but based on the amount of professionals trained and working in North Dakota, it will have a direct and immediate impact on the quality of health care in this state.

The following technical report provides the detailed information required for SBHE policy.

Technical Report

- Project Description : Construction of a multi-floor addition to the School of Medicine and Health Sciences which would accommodate current UND-SMHS departments that are now located elsewhere on campus.
- Total Project Cost: \$28,890,000
- Estimate Source: UND Capital Planning – by program SF
- Requested Source of Funding: State general fund or state bonding
- Deferred Maintenance Reductions: This project will have no impact on deferred maintenance
- Estimated Increase in Operating Cost per annum: \$385,000
- Source of Additional Operating Costs: Appropriation to the UND-SMHS
- Ranking (scale 1-10 where 1 is the least) for SBHE 902.1 -3.b prioritization:
 - Life, Health, Safety: 1
 - Comply with Law or Code: 1
 - Preserve Current Assets: 1
 - New Strategic Investment: 10

Special Notation: UND Capital Planning has revised the anticipated project schedule to complete this work in two phases: Phase 1 would construct a portion of the facility which would stand alone but include key infrastructure elements. Phase 2 would complete the building proper including all furniture, equipment, landscaping, and parking needs. Phase 1 costs: \$16,400,000 Phase 2 costs: \$12,490,000.

- SBHE Rank Order Criteria (902.1 -4)
 - This project will enhance ADA compliance for the SMHS facilities.
 - This project will not result in any reductions in deferred maintenance.
 - This project is not required to address (the need does not exist) any special maintenance problems which could compromise the structural integrity of the building.
 - This building project has been identified as the number one priority for meeting UND-SMHS strategic goals. It is a critical component for placing SMHS departments within a central location as a means to facilitate interdepartmental interactions.
 - This project has not received any partial funding from a previous legislative session.
 - The project is rated as the number one SMHS capital construction priority, but is not supported by outside funding.
 - The new space will be used to advance the mission of the SMHS.
 - The project is not required in order to address any infrastructure needs.
 - The project remains consistent with the institution's master plan through the following:
 - Relocation of college departments to best accommodate faculty, staff, and student interactions.
 - 2)Continues to develop core academic functions within the central campus region.

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- Campus Facilities Planning conducted preliminary facility program exercise which revealed the following needs for the new facility:
 - There is currently insufficient space within the existing SMHS to accommodate all of its related departments effectively.
 - Rural Health.
 - Clinical Lab Sciences
 - Physicians Assistant Program
 - Physical Therapy
 - Occupational Therapy
 - Sports Medicine

Locating all of the SMHS departments currently on the UND campus within close proximity to the SMHS will greatly enhance the learning / teaching capabilities.

Additional lecture/classroom space is required.

- Intended use of new space. The additional space created by this project will be used for the following:
 - No. 1 - Provide space for programs currently located elsewhere on campus or having insufficient space within the existing SMHS facility.
 - Cost Breakdown:
 - New construction: \$25,000,000
 - Landscaping and Paving: \$380,000
 - Furniture, fixtures, and equipment: \$1,600,000
 - Moving Expenses: \$75,000
 - Facility Personnel Expenses: \$35,000
 - Fees: \$1,800,000
 - Total requested appropriation: \$28,890,000
 - Age and Condition of Existing Facilities: Not Applicable

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Capital Project

Joint NDUS/UND IT Facility

	Request/Optional	Recommendation
Total Project Cost	17,600,000	11,200,000
General Fund	17,600,000	11,200,000
Federal Funds	0	0
Special Funds	0	0
Bonding	0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 17,600,000

Future Increased Costs Associated with Project Approval

	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	22,061	23,385	24,905	FTE	0.00	0.00	0.00
Operating Expenses	134,029	142,070	151,305	General Fund	156,090	915,455	974,960
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	750,000	798,750	Special Funds	0	0	0
Special Lines	0	0	0	Total	156,090	915,455	974,960
Total	156,090	915,455	974,960				

Project Specifics and Justification

A preliminary sizing estimate for a 43,000 square foot building to accommodate sixty NDUS SITS and another sixty UND ITSS staff along with common areas (conference/collaboration rooms, lunch room, rest rooms, media rooms, work/staging rooms, etc.) and minimal space for growth is being proposed. Space would be on two floors to allow secured areas separated from areas where the general public might have access (such as training rooms, receptionist, or Director level offices).

There is a need to retain approximately 2,000 square feet of space for about twelve UND ITSS staff and a learning lab in the central core of the campus. These staff would be the instructional service, desktop support and other direct services staff who need close proximity to serve classrooms, provide faculty workshops and consultation, and provide desktop support to central campus; and to offer software purchases, a pickup and drop off location for exams, etc.

There are two primary reasons driving the need for a shared North Dakota University System, System Information Technology Services (SITS) and the University of North Dakota, Information Technology Systems and Services (ITSS) facility. The first is collocation of staffs and the second is to remedy problems with the location of the current UND Data Center.

Staffs for the NDUS SITS and UND ITSS are located in six different buildings spread across the UND campus and off campus making it difficult to readily coordinate, cooperate, and share resources. Buildings are spread as much as a mile apart making it inefficient and ineffective for "spur of the moment" communications to take place. There is a need for ongoing discussion, planning troubleshooting, and interaction with each other on a daily basis. At present, staffs need to schedule times to meet for discussion of projects, do planning, and discuss resolutions to problems. By having staffs collocated, a short walk to the other's cubical or office would be all that is required and the ability to bring others into the conversation can be quickly accomplished.

The UND Data Center which hosts critical NDUS, SITS, and UND services is faced with a number of problems. Since it is located in the basement, it is vulnerable to water flooding/seeping events. All data servers, data storage systems, backup systems, and network management systems are located in this location. Additionally, the data center is limited in size, electrical power, energy efficient HVAC features and enhanced security features for growth and other requirements of NDUS, SITS, and UND

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services. Currently, there is no capacity to add additional systems because of electrical power constraints so something must be removed from service before another is added. While electrical power could be added in the existing location, long term projected space constraints will limit usefulness.

Constructing a building designed for use by NDUS SITS and UND ITSS would eliminate the issues impacting the data center and by bringing all NDUS SITS and UND ITSS staff under the same roof, eliminates the "silo" effect and enhances communications, collaboration, efficiency, and management of staff.

The following table is a recap of the current building locations, number of assigned staff to the space, and the square footage of space assigned. Figures for space assigned were provided by UND Facilities.

It should be noted that space is leased from the North Dakota Vision Services/School for the Blind at a rate of \$42,089 for FY'08 and FY'09 whereas all other space is provided by UND at no additional cost to the NDUS.

Organization	Location	FTE Count	Sq Ft Assigned
NDUS – Admin Sys Dev	Leonard Hall	19.5	3,881 See Note 1
NDUS – ODIN	Leonard Hall	7.5 plus 2 to be hired	2,667 See Note 2
NDUS – IVN	314 Cambridge	6 w/ 2 on site part time	2,523 See Note 3
		17 w/ 1 temp plus 3 on-site part time. Also space needed for Fargo located staff when on-site.	4,431 See Note 4
NDUS – Campus Solutions	ND Vision Services/School for the Blind		Lease for FY'08 and FY'09 \$42,089 per year
UND – Data Center	Upton II	53.5 plus 3 student helpers	11,579
UND – Machine Room	Upton II	2,916 included in above figure	
UND – Instructional Support	Robertson/Sayre Hall	7 plus 6 student helpers	6,315 See Note 5
UND – Telecommunications	Carnegie	11	4,527 See Note 6

NOTES:

1. Includes a conference room but not other space such as bathroom or break room, etc.
2. Includes a meeting room but not other space such as bathroom or break room, etc.
3. Includes common space of conference room, break room, bathroom, and some storage space.
4. Includes conference room and a small training room.
5. Includes training room, lab/workshop, and AV equipment storage for campus distribution.
6. Includes training room (1,085 sq ft) and break room.

It should be noted that the space vacated by the UND IT staff and equipment would require renovation in order to be used by other departments. These costs are not specifically included within this budget request.

Total Project Cost: \$17,600,000 which reflects all fees, equipment, land acquisition and insurance necessary to complete the project.

Reduction in deferred maintenance: No impact

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Annual increase in operating cost: \$156,000 (estimated for both UND and NDUS)

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Capital Project

EERC Slurry Building Expansion

	Request/Optional	Recommendation
Total Project Cost	2,700,000	2,700,000
General Fund	0	0
Federal Funds	0	0
Special Funds	2,700,000	2,700,000
Bonding	0	0

Is this a multiennium project? No No of Biens: 1 Est. Costs 2,700,000

Future Increased Costs Associated with Project Approval

	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	14,000	14,840	15,805	General Fund	0	0	0
Equipment > \$5,000	0	10,000	10,650	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	14,000	24,840	26,455
Special Lines	0	0	0	Total	14,000	24,840	26,455
Total	14,000	24,840	26,455				

Project Specifics and Justification

Project Description: Expansion to the existing facility to accommodate testing of fuel production technologies. *This work will follow a previous project that expands the infrastructure in preparation for the expansion. The infrastructure project authorization will be sought as a separate SBHE agenda item as it does not require legislative authorization.*

- Total Project Cost
 - Construction (including all related costs): \$1,200,000
 - Equipment (and sundry furniture): \$1,500,000
 - Total project costs: \$2,700,000
- Estimate completed by: EERC Research & Development Staff in coordination with Campus Capital Projects and Planning.
- Source of Funding: Accelergy Corporation and the U.S. Department of Energy. No University funds will be used on this project.
- Deferred Maintenance Reductions: Minimal
- Estimated Increase in Operating Costs: Minimal
- Ranking (scale of 1-10 where 1 is the least) for SBHE 902.1 -3.b prioritization:
 - Life, Health, Safety: 1
 - Comply with Law or Code: 1
 - Preserve Current Assets: 1
 - Strategic Investment: 1

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Capital Project			
EERC Office and Lab Addition			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	12,500,000	0
	Federal Funds	12,500,000	0
	Special Funds	0	0
	Bonding	0	0

Is this a multiyear project? No No of Biens: 1 Est. Costs 12,500,000

Future Increased Costs Associated with Project Approval								
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017	
Salaries and Wages	55,153	58,462	62,262	FTE	0.00	0.00	0.00	
Operating Expenses	204,847	217,138	231,252	General Fund	0	0	0	
Equipment > \$5,000	0	50,000	53,250	Federal Funds	130,000	187,800	200,007	
IT Equipment > \$5,000	0	50,000	53,250	Special Funds	130,000	187,800	200,007	
Special Lines	0	0	0	Total	260,000	375,600	400,014	
Total	260,000	375,600	400,014					

Project Specifics and Justification

Making Opportunities Happen

The University of North Dakota (UND) Energy & Environmental Research Center (EERC) is a robust and dynamic research and development engine on the UND campus which serves a variety of industry and government needs for basic and applied energy and environmental science research. With an annual budget of approximately \$40,000,000, the EERC has significant economic impact for the region and state, with revenue generated from sources in every state in the United States and 51 foreign countries.

The single most important asset for the EERC's continued success is its people. The EERC is well known for its culture of industry and self-determination that provides the competitive atmosphere necessary to attract and retain the brightest and best within the industry. Maintaining a critical mass of talented professionals requires a continued investment in quality work space that enhances recruitment and supports productivity. At this time, the EERC cannot continue to attract this valuable talent, and risks losing its current momentum, if additional support space is not developed.

The EERC has expanded dramatically over the last decade while office and laboratory space to house employees has been completely utilized. An office building completed in FY2005 is fully occupied, and all laboratory space is fully utilized. The EERC is simply out of space to house projected growth.

EERC projects typically integrate a large number of people and physical resources (buildings housing unique facilities) in order to accomplish project objectives. This integration makes it mandatory that the people and equipment be located in close proximity to each other.

It is projected that the additions proposed will allow the EERC to expand its staff by 100 people. The EERC staff consists of a cross section of highly paid professionals including scientists, engineers, laboratory technicians, equipment operators and a full complement of administrative and business professionals. The proposed additional office and laboratory space will be utilized by all personnel in performance of their research activities.

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In FY09, Dr. Larry Leistritz of the North Dakota State University estimated the economic impact of the EERC to be approximately \$137.2 million. Based on this estimate, the EERC's economic impact would increase by approximately \$45 million in FY09 dollars by the time the building is fully occupied.

Technical Report

- Project Description: Construction of a multistory addition to the existing EERC office and laboratory complex.
- Total Project Cost, including all work and equipment associated with the planned facility addition: \$12,500,000.
- Estimate Source: UND Campus Capital Projects and Planning.
- Requested Source of Funding: State general fund.
- Deferred Maintenance Reductions: N/A
- Estimated Increase in Operating Cost per annum: \$268,000
- Source of Additional Operating Costs: Derived from EERC facility and administration cost recovery through research contracts.
- Ranking (scale 1–10 where 1 is the least) for SBHE 902.1-3.b prioritization:
 - Life, Health, Safety: 1
 - Comply with Law or Code: 1
 - Preserve Current Assets: 1
 - New Strategic Investment: 10
- SBHE Rank Order Criteria (902.1 -4)
 - This project is required to augment the continued operational success of the EERC.
 - This project will have no significant impact in reducing the amount of deferred maintenance at the EERC.
 - This project is not required to address (no such need exists) any special maintenance problems which could compromise the structural integrity of the building.
 - This building project has been identified as the No. 2 priority for meeting UND strategic goals.
 - No other funding source is anticipated to supplement this project.
 - The planned addition is critical to the continued success of the EERC mission of research and development.
 - The project does not address any critical utility or infrastructure need.
 - The project remains consistent with the institution's master plan through the following:
 - Sustain growth within the research mission of the institution.
 - Supplement future grant and contract revenue by investing in research.
 - Campus Capital Projects and Planning has conducted a preprogramming survey that defines the scope of work and need:
 - The EERC is currently at maximum occupancy in the administrative and office areas which support the core research operation.
 - There remains a high demand for additional research staff specializing in areas that are part of the EERC mission.
 - There is no alternative construction model (renovation, etc.) that can provide the necessary space.
 - Construction of the new facility will accommodate the following:
 - Additional office space to accommodate 100 new research professionals.
 - Laboratory space to accommodate expanded staff and associated projects.
 - Cost Breakdown:
 - New office/lab addition: \$12,500,000
 - Age and Condition of Existing Facilities:
 - The existing EERC campus is in overall excellent condition, but a number of smaller buildings should eventually be combined into a single facility.

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Capital Project			
Wilkerson Hall Renovation & Addition			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	14,000,000	14,000,000
	Federal Funds	0	0
	Special Funds	14,000,000	14,000,000
	Bonding	0	0

Is this a multiyear project? No No of Biens: 1 Est. Costs 14,000,000

Future Increased Costs Associated with Project Approval							
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	11,031	11,692	12,452	FTE	0.00	0.00	0.00
Operating Expenses	111,469	118,158	125,838	General Fund	0	0	0
Equipment > \$5,000	0	55,000	58,575	Federal Funds	0	0	0
IT Equipment > \$5,000	0	15,000	15,975	Special Funds	122,500	199,850	212,840
Special Lines	0	0	0	Total	122,500	199,850	212,840
Total	122,500	199,850	212,840				

Project Specifics and Justification

Note: Anticipated funding source for this project is the sale of revenue bonds. UND subsequently requests that permission to do so be granted and further included within the Governor's budget as a request for the legislature during its 2011 session.

- Project Description: Renovation and possible addition to Wilkerson Hall. This facility is one of the largest UND food service operating centers, and was designed and constructed in the early 1970's do accommodate the serving arrangements prevalent for the era. Based on the changing styles of food delivery systems, Wilkerson Hall has fallen into obsolescence and must be renovated. The potential addition will provide modern study space, multipurpose space, and accommodate ADA required access to Wilkerson Hall proper.
- Total Project Cost
 - o Construction (including all related costs): \$14,000,000
 - o Equipment (and sundry furniture): Included with construction
 - o Total project costs: \$14,000,000
- Estimate completed by: Housing/Dining master plan consultants in coordination with Campus Capital Projects and Planning.
- Source of Funding: Revenue bond sales.
- Deferred Maintenance Reductions: \$320,616
- Estimated Increase in Operating Costs: \$125,000
- Ranking (scale of 1-10 where 1 is the least) for SBHE 902.1 -3.b prioritization:
 - o Life, Health, Safety: 5
 - o Comply with Law or Code: 5
 - o Preserve Current Assets: 5
 - o Strategic Investment: 10

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