

Contact: Joan Racki

FACILITIES GOVERNANCE REPORT

Actions Requested: Receive the report and recommend to the Board that it reaffirm the Board's support for continued:

1. Inter-institutional collaboration and coordination on facility issues, and
2. Institutional correction of identified fire safety and deferred maintenance deficiencies within the limits of available resources.

Executive Summary: The annual Facilities Governance Report, required by the Board's *Policy Manual*, is intended to provide the Board with a broad overview of the facilities at each of the Regent institutions and the condition of these facilities. The report includes information and updates on fire and environmental safety, and deferred maintenance.

Along with its human resources and its intellectual, financial and equipment assets, facilities are a primary resource of a higher education institution. Quality facilities help ensure excellent academic programs and the ability to attract and retain faculty, staff and students.

Regent Facilities: Academic/research/administrative (general fund) facilities at the Regent institutions total approximately 18.1 million gross square feet of the total 38.5 million gross square feet of Regent enterprise facilities. Categories of other facilities include University Hospitals and Clinics; agricultural experiment station; and self-supporting operations, including student unions, residence systems and parking systems. The FY 2016 replacement value of all Regent facilities is estimated at \$18.5 billion, of which \$9.1 billion is the replacement value for academic/research/administrative facilities. The Regent institutions have a total of 4,498 on-campus acres and 758 off-campus acres, excluding farm acreage.

Optimal Utilization of Facilities: In June 2003, the Board adopted evaluation criteria for major capital projects as defined by Board policy. Responses to the criteria are included in the capital registers when major projects are requested. These criteria have influenced institutional reviews and each university emphasizes space utilization in its stewardship of existing facilities and has established policies, procedures, practices or principles to help ensure the optimal utilization of facilities. These are consistent with the strategies and policies adopted by the Board in May 2006. Information on institutional specific initiatives is included in Attachment A. In addition, the universities are developing plans to address the recommendations from the Ad Astra TIER study.

Institutional Coordination/Cooperation: In previous Facilities Governance reports, the universities provided an extensive list of collaborative and coordinated efforts in facilities-related areas. This collaboration allows the universities to share best practices and to pool resources to investigate and pursue innovative and cost saving approaches, as well as to collaborate on emerging facilities and utilities issues. The institutions work to explore new areas for collaborative/cooperative efforts and continue to work on efforts begun in recent years.

Inter-institutional meetings include separate groups for custodial operations, maintenance, utilities, energy management, design and construction, landscape services and interior design, as well as space management.

During the last year, the University of Iowa Biomass Project expanded its partnership with the Iowa State University Department of Agronomy, the Bioeconomy Institute and the Center for Sustainable Environmental Technologies and several business partners to recruit additional eastern Iowa landowners to grow non-invasive miscanthus for use as a biofuel at the University of Iowa power plant. The University of Iowa hosted a disability awareness summit for education disability service providers from across the state on accessible way-finding and strategies for achieving inclusive design. In addition, some of the ongoing activities are outlined on page 6.

Fire and Environmental Safety Deficiencies and Deferred Maintenance: Fire safety deficiencies (identified by the State Fire Marshal, other entities engaged in fire safety reviews, or institutional personnel) and deferred maintenance (repair or replacement of all, or a part of, an existing capital asset that was not repaired or replaced at the appropriate time because of a lack of funds) can be corrected as individual projects, incorporated into major renovations / rehabilitations, or eliminated through the demolition of structures. The Board's FY 2017 – FY 2021 Five-Year Capital Plan, approved at its September 2015 meeting, includes \$100 million (\$25 million each year for FY 2018 – FY 2021) for individual projects to correct fire safety and deferred maintenance deficiencies.

The State Fire Marshal's Office and other external entities have identified fire safety deficiencies in general fund facilities which the institutions have estimated would cost \$9.8 million to correct; this amount is lower than the amount (\$11.0 million) reported for Fall 2014.

Identified, potentially life-threatening fire safety deficiencies are promptly addressed and corrected, or facilities are closed until they can be made safe. Other identified deficiencies are prioritized for correction. Progress in addressing fire safety issues will continue to be challenged by new safety standards, aging buildings and changes in building usage.

For Fall 2015, the Regent institutions report a total of \$751.4 million in deferred maintenance in general fund facilities and utilities, excluding on-going renovation projects, FY 2016 planned projects, and the deferred maintenance to be corrected as components of major renovation projects previously authorized. This total compares to the \$647.5 million reported for Fall 2014. While this amount is an increase of \$103.9 million (16.0%) or approximately four times the construction cost inflation factor of 4.0%, it is important to note that the universities continue to undertake complete building assessments, and to refine their analyses which can lead to the reporting of increased amounts. In addition, for many building systems, end of life milestones are being reached. Further information is included in Attachment B.

Report Organization: The report includes the following attachments:

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BACKGROUND

Campus Facilities: Regent facilities total 38.5 million gross square feet (GSF); approximately 32.5 percent of the square footage was constructed during the period 1961-1980, as was approximately 32.7 percent of the 18.1 million GSF of academic/research/administrative space. (The newest of these facilities are more than 30 years of age.) This construction “boom” was similar to the “boom” found among other higher education institutions in the United States.

The age of facilities is one of the factors contributing to the amount of deferred maintenance and the presence of fire safety deficiencies. Renovation provides a means to modernize facilities to meet current needs, and to address deferred maintenance and fire safety deficiencies. The following table summarizes, by year of construction, the Regent institutional total gross square footage (GSF) and academic/research/administrative (including Oakdale) total GSF.

Years	Regent Total Square Footage		Academic/Research/ Administrative Square Footage*	
	GSF of Intial Construction	Percent of Total	GSF of Intial Construction	Percent of Total
Pre-1930	5,375,002	13.98	3,686,036	20.37
1931-1950	1,604,234	4.17	824,566	4.56
1951-1960	2,205,311	5.74	719,253	3.98
1961-1970	7,014,105	18.24	2,771,120	15.32
1971-1980	5,482,413	14.26	3,147,797	17.40
1981-1990	3,560,811	9.26	1,589,669	8.79
1991-2000	5,072,111	13.19	2,078,828	11.49
2001-2010	5,761,098	14.98	2,453,623	13.56
2011 - present	2,378,170	6.18	822,350	4.55
Total	38,453,255	100.00	18,093,242	100.00

*Includes Oakdale

The total square footage by institution, by function, is as follows:

	<u>SUI</u>	<u>ISU</u>	<u>UNI</u>	<u>ISD</u>	<u>IBSSS</u>	<u>Total</u>
Acad/Res/Admin	8,102,760	6,873,633	2,544,106	381,236	191,507	18,093,242
UIHC	3,877,835					3,877,835
All Other	6,783,059	7,409,665	2,289,454			16,482,178
Total	18,763,654	14,283,298	4,833,560	381,236	191,507	38,453,255

Capital Expenditures: Since FY 2011, the Regent institutions have expended almost \$2.0 billion for capital projects with project costs exceeding \$250,000.

The following table compares institutional expenditures for FY 2011 – FY 2015.

Projects with Costs Exceeding \$250,000 - All Funds* (\$ in millions)											
	FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	#		#		#		#		#		
	Proj	Exp	Proj	Exp	Proj	Exp	Proj	Exp	Proj	Exp	
SUI	181	\$ 160.7	198	\$ 225.9	196	\$ 244.5	203	\$ 361.0	202	\$ 412.3	
ISU	89	89.9	105	79.1	91	125.2	100	84.9	97	105.8	
UNI	41	23.0	37	13.4	37	35.2	29	13.4	24	6.4	
Total	311	\$ 273.6	340	\$ 318.4	324	\$ 404.9	332	\$ 459.3	323	\$ 524.5	

* As submitted by the institutions to the Board Office on capital project status reports.

The expenditures are from all sources of funds including capital appropriations; building renewal (repair) funds; institutional road funds; gifts and grants; income from treasurer’s temporary investments; proceeds of academic building, dormitory, telecommunications, and other revenue bond issues; and university hospitals building usage funds and revenue bonds.

Optimal Utilization of Facilities: In May 2006, the Board adopted policies and procedures on the optimal utilization of facilities. These policies are included in Attachment C on page 16.

To balance and align current space requests with long-range goals, decisions about space at the University of Iowa are reviewed and coordinated with the Campus Master Plan, which is a living document, updated regularly. The University’s Department of Facilities Management and Provost’s Office recently revised the approach to Master Planning to strengthen the alignment of the University’s programmatic needs with the physical assets that are required to support them. The University reports that this approach provides opportunities to address program needs in an adaptable, efficient and cost-effective manner.

The University is refining the structure and processes to facilitate a more strategic and optimized approach to the utilization and assignment of campus space. The Department of Facilities Management is working with campus programs to develop a campus space model that will be used to create an ongoing University Space Plan. The model will give the University the ability to test a variety of planning scenarios and understand the impact that each will have on campus facilities. The University Space Plan is a component of the improved on-going master planning process. Many campus entities are involved in space allocations and assignments; the majority of day-to-day space needs are accommodated by reassigning existing space.

The University is testing a new two-step process to improve the programming process for capital projects. Step 1, the Feasibility Study, is being beta tested on several projects during the pre “Permission to Proceed” phase. A potential project for a beta test of Step 2, the full Program Plan, has not yet been identified.

Iowa State University reports that it has adopted policies, procedures and practices to provide for the optimal utilization of existing campus facilities; the primary responsibility for the effective and efficient use of space rests with the Facilities Planning and Management Space Management Office, with support from the administration. The University's *Policy Library* states that space is a limited resource owned by the University and available for reallocation to support the University's mission.

The University's capital process, established in 2002, was refined in 2012 to guide the development of capital projects, and to engage the University community in a consistent and comprehensive review and approval process that supports the University's strategic needs. The University's approach emphasizes that the optimal use of space includes reallocation to meet the best use, remodeling when necessary to provide functionally appropriate facilities to meet program needs, and the construction of new space if no other alternative is acceptable or available. One of the elements of the University's new Resource Management Model of budgeting is that units pay the full operating costs of the space they occupy and use. The University reports that departments have become more engaged in the preliminary planning and design of capital projects, and in the impact of decisions made at these early stages on a project's life cycle costs.

The University of Northern Iowa has established principles and procedures stating that space on campus should be utilized for the maximum benefit of the entire University. All instructional space assignments are made by the Registrar's Office, which may assign University classrooms or laboratories to a specific college or department for priority use, while retaining the authority to schedule the space when not in use. Within the last year, the University retained a consultant, Ayers Saint Gross of Washington D.C., to update the space database and verify utilization rates, numbers of rooms, numbers of stations and square footage calculations. The University's Facilities Planning Advisory Committee serves as the recommending body to the President's Executive Management Team regarding space assignment and utilization, and capital project priorities. The Facilities Planning Office works with the Registrar's Office on all major new and renovation projects to determine appropriate classroom and laboratory needs. Attention is given during planning to maximize usable space in facilities for a high net to gross square foot ratio.

The special schools (Iowa School for the Deaf and Iowa Braille and Sight Saving School) report that they continue to improve efficiency and productivity of services supported by the Council Bluffs and Vinton sites, including development of flexible and innovative services delivered in regional locations, as needed. The Schools continue to work with Iowa State University to develop and implement processes and procedures to ensure efficient use of physical facilities.

AmeriCorps NCCC established its North Central Regional site at the Iowa Braille School in June 2008; renovation projects were completed in 2010 to accommodate an increased number of corps members. Annually, the site accommodates approximately 750 corps members and 24 administrative staff.

Institutional Cooperation / Coordination: Iowa's public universities continue to work together and coordinate efforts related to facilities. This collaboration allows the universities to share best practices and to pool resources to investigate and pursue innovative and cost saving approaches. Regularly scheduled meetings are held for personnel in the areas of custodial operations, maintenance, utilities, energy management, design and construction, landscape

services, space management, workplace safety and interior design. Iowa State University Department of Facilities Planning and Management is responsible for the administration of capital projects at the special schools and provides technical consultation as needed. Iowa State University's Environmental Health and Safety Office provides training and monitors compliance for asbestos, lead, chemical management and safety policies at the special schools.

Some of the collaborative and coordinated efforts highlighted in this year's institutional reports are:

- Adapting/creating job classifications to keep pace with the increasing technological complexity of facilities systems, with adoption of tier responsibility levels for electricians, environmental system mechanics and sheet-metal mechanics.
- Sharing service contracts for environmental emissions testing, hazardous and universal waste disposal, electronic waste recycling and boiler water treatment.
- Collaborating by the University of Northern Iowa and Iowa State University on a maintenance, repair and operations contract with a company which has a broad inventory of equipment and maintenance supply items utilized by the facilities staffs.
- Working together to address the impact and implement the National Fire Protection Agency Arc Flash requirements for safety in the workplace, especially for electricians and maintenance staff. (An arc flash, an explosive release of energy, takes place when a fault condition or short circuit occurs.)
- Collaborating by the three universities on research and development of a shared cleaning chemical contract, with an emphasis on green cleaning.
- On-going monitoring of state licensure requirements for staff including electricians, plumbers, HVAC technicians, fire alarm systems installers, elevator mechanics, etc. to assure applicability and compliance for all Regent institutions.
- Collaborating by the institutions on Institutional Roads Program planning and road maintenance.
- Teaming up by Iowa State University and University of Northern Iowa staffs on the implementation and processes associated with the FAMIS facilities management software and CentricProject project management collaboration software.
- Consulting on space standards for new capital projects: The University of Iowa and Iowa State University are members of the Higher Education Facility Management Association (18 member institutions); the group meets twice a year to share common practices, space database content and updating, and general planning strategies; the association collects and publishes benchmarking data from its members every two years.

Iowa's public universities and special schools also continue to expand cooperation and sharing arrangements with the public entities (cities, counties, school districts, conservation boards) in the municipalities in which they are located.

FIRE AND ENVIRONMENTAL SAFETY AND DEFERRED MAINTENANCE

BACKGROUND

Fire and Environmental Safety: Fire and environmental safety standards are established by several agencies, including the State Fire Marshal, and federal and state governmental regulatory entities. The State Fire Marshal's Office or other external entities may identify deficiencies during campus inspections, or campus personnel may note the deficiencies.

Potentially life-threatening deficiencies are promptly addressed and corrected, or the facilities are closed until they can be made safe. Lesser risks are prioritized using multiple factors, including hazard assessments and regulatory requirements. Corrective work is undertaken as funds are available, or the fire safety improvements may be accomplished as part of a renovation project. Each year, there are subtractions to the list as work is accomplished. Additions to the list can result from the altered use of a space, which changes the applicable building code requirements, or the new identification of a deficiency due to different interpretations of the code. Thus, the amount needed to correct the deficiencies does not necessarily decline by the amount that institutions have expended since the previous inspection.

The Regent institutions cooperate with the State Fire Marshal's Office in establishing fire safety priorities; each institution has a systematic method for determining the priority of fire safety improvements to be undertaken. Citations from the Office can be classified as (1) user [housekeeping or procedural items such as use of a doorstep to prop open a door], (2) maintenance [items that require no design and minimal expense, such as door repairs], or (3) other deficiencies [items for which the correction requires an outlay of funds beyond facility management maintenance funds; these items are prioritized].

Environmental safety deficiencies may be identified by campus personnel and regulatory entities. Environmental safety issues include asbestos, lead, underground storage tanks, spill prevention control and countermeasure plans, storm water pollution protection plans, polychlorinated biphenyls (PCBs), mercury, the Clean Air Act, and radioactive sites.

Deferred Maintenance: For a number of years, the institutions and Board Office have used the following common definition: Deferred maintenance is the repair or replacement of all, or a part of, an existing capital asset that was not repaired or replaced at the appropriate time because of a lack of funds.

Deferred maintenance is dependent upon time and is sometimes referred to as "capital renewal backlog." Replacement of a building or infrastructure system or component when it should be replaced is building renewal, not deferred maintenance. Deferred maintenance results from inaction on normal maintenance, including planned and preventive maintenance, and renewal and replacement projects.

Adequate funding of regular maintenance can significantly extend the useful lives of facilities and their components. Adequate funding of building renewal is also needed to replace building components.

Deferred maintenance in higher education is a national problem and is partially the result of building booms that occurred during the 1960s and 1970s. The facilities built at that time have aged and many of their component systems have reached the end of their design lives or have become obsolete. Campuses in the United States built more space from 1960 to 1975 than over the previous 80 years combined. Sightlines, a national facility consulting firm, has also noted the waves of construction, with buildings built before 1950 being older, but typically lasting longer. The firm has identified those built between 1961 and 1975 as lower-quality construction and experimental especially in mechanical systems that manage building environmental conditions, and those built since 1995 as higher quality construction, but with complex mechanical systems with shorter equipment lifecycles. The types of construction impact the timeline for replacement of building systems.

Sightlines, in its recent report *State of Facilities in Higher Education – 2015 Benchmarks, Best Practices & Trends*, noted that the distribution of space across age categories is an important indicator of long-term facilities risks and capital needs. “Samples of work order data collected by Sightlines also shows that these 25-50 year old buildings drive more and higher cost work orders than any of the other age groups on campus including the over 50 year old buildings.” (page 6)

Funding Sources: The Regent institutions have made major efforts to correct fire and environmental safety issues and deferred maintenance over the last several years and have received significant state assistance.

The 2011 General Assembly appropriated \$2 million for FY 2012 for immediate fire safety needs and for compliance with the Americans with Disabilities Act (ADA). Funds not utilized by the special schools for storm damage recovery from the \$2 million appropriated for FY 2013 will be available for use for fire safety and ADA needs at the Regent institutions. The 2013 General Assembly also appropriated \$2 million to correct fire safety needs and deferred maintenance and for compliance with ADA. The projects for which funds were appropriated during the 2014 legislative session (SUI – Pharmacy Replacement / Improvements; ISU – Biosciences Facilities; and UNI – Schindler Education Center Renovation) will eliminate approximately \$26 million in deferred maintenance. The ISU – Student Innovation Center, for which funds were appropriated during the 2015 legislative session, will be located on the site of the Nuclear Engineering Building and the original Sweeney Hall. Demolition of these buildings, previously approved by the Board, will eliminate approximately \$3 million in deferred maintenance.

Major funding sources for fire safety and individual deferred maintenance projects (not including deferred maintenance items completed as part of renovations) completed from FY 1993 through FY 2015 at the universities and special schools include: general fund operating budgets (\$219.5 million), utility renewal and replacement funds (\$128.4 million), proceeds from academic building revenue bonds and capital appropriations (\$63.6 million), income from treasurer's temporary investments (\$29.7 million), and UIHC building usage funds (\$25.2 million).

ANALYSIS

The budget challenges of the last few years and the aging of buildings and their systems have led to an increase in deferred maintenance and hindered the institutions' capabilities to correct fire and environmental safety deficiencies. Maintenance cycles and preventative maintenance activities have been delayed or eliminated, placing buildings and occupants more at-risk for unanticipated building system outages. The inability to make needed repairs/replacement of roofs, exterior building envelopes, windows, plumbing and electrical systems can cause further damage to the facilities, thus increasing the costs of future repairs.

The amount budgeted for FY 2016 for building repair represents approximately 0.49% of the \$9.1 billion replacement value of the university and special school general educational facilities. Building repair expenditures for FY 2015 for the Regent institutions in total represented 0.58% of the replacement value. According to national standards, this percentage should, at a minimum, be equal to 1% of the replacement value of the facilities to prevent their further deterioration. The University of Iowa has pursued an overall building renewal (critical deferred maintenance and asset reinvestment) target of 1%. Iowa State University has reallocated \$1 million for new base funding to correct deferred maintenance in each year (FY 2012 – FY 2015); the University reports that this new funding has allowed it to more proactively address deferred maintenance issues.

Fire and Environmental Safety: As reflected in Table 1 on page 14, fire safety projects completed from FY 1993 (the first year in which data were collected) through FY 2015, totaled \$77.3 million in general fund facilities, including UIHC (an average of \$3.36 million per year). Projects planned for or continued in FY 2016 total \$3.5 million.

The institutions indicate that \$9.8 million are needed to correct fire safety deficiencies in the general fund and UIHC facilities identified in past inspections by the State Fire Marshal and other external entities is shown below.

FIRE SAFETY DEFICIENCIES
Additional Funding Needed to Correct Fire Safety Deficiencies
Identified by External Entities¹
General Fund Facilities
(\$ Thousands)

	Fall 2015 (FY 2016)
SUI (includes Oakdale)	\$ 2,684.5
UIHC	-
ISU	6,543.6
UNI	471.5
ISD	-
IBSSS	55.0
Total	\$ 9,754.6

¹Includes items identified by State Fire Marshal's Office and other external entities; excludes work in buildings to be demolished, and for which waivers from the State Fire Marshal are to be requested.

The total amount reported is approximately \$1.2 million less than the amount reported last fall as the institutions addressed fire safety deficiencies previously identified within available resources. Progress in addressing the deficiencies has been made.

At the University of Iowa, significant progress towards a safer campus was achieved in FY 2015. The University has increased the number of fire safety inspectors. In addition to inspecting fire equipment in general fund buildings, the inspectors also conduct regular fire prevention inspections. Facilities Management staff continued to network fire alarm systems, making a total of 62 general fund buildings connected to the five loop network. This system provides actual building floor plans, showing each fire alarm device, and will provide the University Police communications center with real time information on each networked building. The network can also allow the University Police to activate the building's severe weather alert and perform live voice announcements, if needed, for other types of campus emergencies. In addition, Van Allen Hall was outfitted with a wet-manual standpipe system and the infrastructure to support a complete automatic fire sprinkler system throughout the building.

In FY 2015, progress was also made at Iowa State University as corrections of deficiencies were undertaken as part of the renovation / remodeling projects in Curtiss, Food Science, Forker and Olsen buildings. The estimated cost to remove the deficiencies at the University, as noted above, includes the cost of adding sprinkler systems to nine buildings to address fire corridor deficiencies cited in the 2015 inspection from the State Fire Marshal's Office; in its inspection reports the Office stated that self-closing devices on all doors leading to exits could be installed or the building sprinkled. In previous reports, the University noted that based upon current monies, it is likely that sprinklers would be installed only when a building undergoes

significant renovation. In the buildings not scheduled for renovations, the University would install self-closing devices as funding is identified.

Correcting fire safety deficiencies is a high priority for the University of Northern Iowa. The University's Environmental Health and Safety Office's Fire and Safety Specialist continues to conduct fire safety inspections, the goal of which is inspecting each campus building at least once a year. Fire safety deficiencies were addressed as part of the recently completed renovation of Bartlett Hall and are being incorporated into the renovation of Schindler Education Center, which received funding during the 2014 legislative session.

The State Fire Marshal's Office conducted its most recent inspection of the Iowa School for the Deaf in January 2015. All of the deficiencies noted in that report have been corrected.

The State Fire Marshal's Office has discontinued regular inspections of the Iowa Braille and Sight Saving School due to the closure of the residential program and the shift from a typical school environment with children regularly present. As an alternative safety measure, a bi-annual environmental safety inspection was conducted in April 2014, by Iowa State University Environmental Health and Safety Department. Six of the seven deficiencies noted in the report have been corrected.

The institutions report that they have developed the necessary plans to address campus environmental safety issues.

Deferred Maintenance: As shown in Table 2 on page 15, deferred maintenance totaling \$369.8 million (an average of \$16.1 million per year) from FY 1993 through FY 2015, was corrected in Regent general fund buildings and utilities, not including deferred maintenance corrected as part of renovations. Projects planned for or continued in FY 2016 total \$82.0 million. Major renovation projects which have corrected or will correct a significant amount of deferred maintenance are also included in Table 2.

The table on the following page summarizes the deferred maintenance reported by the institutions. (Dollar amounts for projects planned to be undertaken in FY 2016 and the deferred maintenance components of ongoing and funded renovation projects are not included.)

General Fund Facilities and Utilities
Fall 2015¹
(\$ Thousands)

	SUI	ISU	UNI	ISD	IBSSS	Total
Individual Projects						
Buildings ²	\$ 122,568.0	\$ 305,378.8	\$ 95,074.0	\$ 3,642.5	\$ 1,622.0	\$ 528,285.3
Utilities	<u>17,877.0</u>	<u>17,886.0</u>	<u>1,183.0</u>	<u>-</u>	<u>-</u>	<u>36,946.0</u>
Subtotal	\$ 140,445.0	\$ 323,264.8	\$ 96,257.0	\$ 3,642.5	\$ 1,622.0	\$ 565,231.3
Included within Five Year Capital Plan (FY 2017 - FY 2021)						
Buildings ²	\$ 63,013.5	\$ 10,067.2	\$ 27,158.0	\$ 6,612.5	\$ -	\$ 106,851.2
Utilities	<u>58,260.0</u>	<u>-</u>	<u>21,024</u>	<u>-</u>	<u>-</u>	<u>79,284.0</u>
Subtotal	\$ 121,273.5	\$ 10,067.2	\$ 48,182.0	\$ 6,612.5	\$ -	\$ 186,135.2
Grand Total						
Buildings	\$ 185,581.5	\$ 315,446.0	\$ 122,232.0	\$ 10,255.0	\$ 1,622.0	\$ 635,136.5
Utilities	<u>76,137.0</u>	<u>17,886.0</u>	<u>22,207.0</u>	<u>-</u>	<u>-</u>	<u>116,230.0</u>
Total	\$ 261,718.5	\$ 333,332.0	\$ 144,439.0	\$ 10,255.0	\$ 1,622.0	\$ 751,366.5

¹Excludes dollar amounts for projects to be undertaken in FY 2016, those to be funded through previously authorized academic building revenue bonds and capital appropriations; and the deferred maintenance components of ongoing renovation projects.

²Includes site work.

The amount of deferred maintenance reported for Fall 2015 is \$103.9 million (16.0%) higher than the amount reported for Fall 2014. While the amount increased from \$647.5 million to \$751.4 million, slightly more than four times the increase in the construction inflationary index of 4%, it is important to note that the universities continue to undertake complete building assessments, and to refine their analyses which can lead to the reporting of increased amounts. In addition, for many building systems, end of life milestones are being reached. The University of Iowa Hospitals and Clinics has not reported any deferred maintenance and indicates that it does not have any maintenance needs that meet the definition of deferred maintenance. All Regent institutions report an increase in the amount of deferred maintenance from Fall 2014 to Fall 2015.

In exercising its facilities stewardship responsibilities, the University of Iowa relies on four basic strategies: 1) ongoing maintenance and operational care of existing facilities, 2) reinvestment in the renewal of long-term physical assets, 3) reduction of the backlog of deferred maintenance, and 4) decommissioning of obsolescent facilities or those with substantial deferred maintenance. The University uses a total cost of ownership decision-making framework (initial project cost and on-going care, utilities and energy costs over the useful life of a facility) for the consideration of various alternatives that may include renovation, improvement, or demolition of existing facilities.

The University of Iowa engaged ISES Corporation (Stone Mountain, Georgia), beginning in 2004, to provide consistent inspections and detailed analyses for existing facilities. The University reports that the facilities condition database has provided effective information for

planning capital renewal needs (keep up expenses), deferred maintenance needs (catch up expenses) and plant adaptation needs (variance of existing building conditions to current codes).

In FY 2014, the University contracted with Sightlines, an educational facilities asset strategic planning, advisory and benchmarking firm, to analyze the investment in the condition and care of the University's general education fund facilities. According to the University, the firm independently verified the University's annual reinvestment target of one percent of the replacement value.

Iowa State University reports that it has a comprehensive, systematic process for identifying its deferred maintenance needs. The methodology involves assessing all general fund buildings in eight different categories. The assessment takes into account the replacement value of the building, the value of the sub-systems within the building, the age of the building and its systems, and the condition of those systems. The process was expanded during FY 2005 to also include building specific assessments to create project estimates for repair and replacement of building system components, such as an air handler, exterior building entrance steps, etc.; the data are entered into the FAMIS facilities management system. The data provide the University with a greater level of detail for assessing deferred maintenance needs relative to available funding. Facilities deferred maintenance priorities are combined with programmatic priorities to assure that funds are applied for maximum effectiveness, both for deferred maintenance and program needs.

The University of Northern Iowa continues to update its deferred maintenance information through building assessments. Information is obtained from users of the buildings, along with the maintenance personnel for the respective areas. When planning renovations, Facilities Planning design and construction staff review the deferred maintenance deficiencies and addresses those as part of the project. The University reports an increase of approximately \$50.7 million in deferred maintenance from last year. A significant portion of the increase is related to the seven complete building assessments performed by Facilities Planning and Physical Plant staffs in FY 2015. Additional assessments are planned for FY 2016. The University reports that an increase in annual budgeted funds will be required to sustain an adequate maintenance schedule for campus buildings. University operations and maintenance personnel currently focus their resources based on a priority system that addresses safety issues, educational support and repair of facilities equipment to lengthen the life of the assets.

TABLE 1
BOARD OF REGENTS, STATE OF IOWA
FIRE SAFETY PROJECTS*
GENERAL FUND FACILITIES
(\$ Thousands)

	<u>SUI**</u>	<u>UIHC</u>	<u>ISU</u>	<u>UNI</u>	<u>ISD</u>	<u>IBSSS</u>	<u>Total</u>
Projects:							
Completed Projects:							
FY 1993	\$ 1,476.5	\$ 507.3	\$ 1,135.6	\$ 551.3		\$ 11.0	\$ 3,681.7
FY 1994	721.2	619.2	365.6	447.3	\$ 111.5	6.9	2,271.7
FY 1995	1,664.2	619.4	153.6	62.5	97.5	10.9	2,608.1
FY 1996	2,233.4	55.0	2,163.7	83.6	211.5	4.0	4,751.2
FY 1997	1,320.0	380.0	235.8	63.8	91.5	41.2	2,132.3
FY 1998	1,401.0	1,552.3	735.9	126.3	125.0	8.1	3,948.6
FY 1999	1,696.0	1,880.8	288.0	12.2	225.0	8.4	4,110.4
FY 2000	1,272.0	2,335.0	219.0	64.3	12.0	1.0	3,903.3
FY 2001	944.0	2,071.7	538.3	77.5	1.0		3,632.5
FY 2002	718.0	1,322.7	542.8	8.2	25.0		2,616.7
FY 2003	930.0	1,377.0	336.9	26.3	23.0	65.0	2,758.2
FY 2004	1,554.5	915.9	295.5	25.0	6.0		2,796.9
FY 2005	1,502.0	2,103.0	177.0	25.0	25.0		3,832.0
FY 2006	1,637.0	2,058.6	215.9	30.0		1.7	3,943.2
FY 2007	978.3	650.0	928.6	36.0	75.0	4.7	2,672.6
FY 2008	1,128.2	676.4	470.0	80.2	700.0	343.3	3,398.1
FY 2009	1,373.0	1,760.1	700.5	80.2	30.0	507.3	4,451.1
FY 2010	1,705.1	-	392.0	52.7	405.0	872.6	3,427.4
FY 2011	3,944.5	350.0	265.6	88.0	300.0	20.6	4,968.7
FY 2012	2,588.8	1,145.2	172.3	204.3	50.0	24.4	4,185.0
FY 2013	987.4	1,040.0	363.4	121.5	-	64.5	2,576.8
FY 2014	1,030.7	1,040.0	365.6	186.1	22.4	-	2,644.8
FY 2015	1,019.7	750.0	108.4	113.9	21.4		2,013.4
Subtotal	\$ 33,825.5	\$ 25,209.6	\$ 11,170.0	\$ 2,566.2	\$ 2,557.8	\$ 1,995.6	\$ 77,324.7
Projects Planned for or Continued in FY 2016	\$ 1,885.0	\$ 750.0	\$ 345.0	\$ 408.7	-	\$ 100.0	\$ 3,488.7
Total	\$ 35,710.5	\$ 25,959.6	\$ 11,515.0	\$ 2,974.9	\$ 2,557.8	\$ 2,095.6	\$ 80,813.4
By Source of Funds:							
Building Renewal / General University	\$ 19,415.5		\$ 6,145.0	\$ 1,798.1	\$ 829.8	\$ 1,672.3	29,860.7
Income from Treasurer's Temporary Investments	10,820.8		542.8	174.8			11,538.4
Academic Building Revenue Bonds	3,150.2		2,994.3	826.0			6,970.5
Special and Capital Appropriations	1,760.0		1,436.9	174.7	935.0	362.3	4,668.9
University Hospital Building Usage Funds		\$ 25,959.6					25,959.6
Other	564.0		396.0	1.3	793.0	61.0	1,815.3
Total	\$ 35,710.5	\$ 25,959.6	\$ 11,515.0	\$ 2,974.9	\$ 2,557.8	\$ 2,095.6	\$ 80,813.4

*Does not include fire safety components of major renovation projects.

**SUI - Excludes UIHC; includes projects approved and funded for FY 93 - FY 03; for FY 1993 also includes projects completed with Academic Building Revenue Bonds, 1991. Includes fire safety improvements in Old Capitol - Fire Restoration and Buildings Improvements and Chemistry Renovation projects.

***Includes fire safety components of renovation projects.

**TABLE 2
BOARD OF REGENTS, STATE OF IOWA FY 1993 - FY 2016
GENERAL FUND BUILDING AND UTILITY DEFERRED MAINTENANCE PROJECTS AND
RENOVATION PROJECTS WHICH INCLUDE CORRECTION OF DEFERRED MAINTENANCE
(\$ thousands)**

Deferred Maintenance Projects:	SUI	ISU	UNI	ISD	IBSSS	Total
Completed Projects:*						
FY 1993	\$ 6,591.9	\$ 970.2	\$ 1,593.4	\$ 45.0	\$ 16.1	\$ 9,216.6
FY 1994	2,881.6	1,881.1	1,459.6	543.5	75.9	6,841.7
FY 1995	4,922.1	7,805.3	1,703.1	148.0	24.8	14,603.3
FY 1996	6,571.3	6,944.4	2,581.3	173.0	207.8	16,477.8
FY 1997	3,262.6	2,953.8	2,256.7	133.1	95.6	8,701.8
FY 1998	3,053.0	3,495.3	1,677.7	282.5	172.5	8,681.0
FY 1999	2,928.8	3,492.2	3,435.2	470.0	36.8	10,363.0
FY 2000	6,375.4	5,522.2	3,859.1	758.0	595.1	17,109.8
FY 2001	3,798.2	6,104.2	858.7	485.0	49.1	11,295.2
FY 2002	2,598.9	2,463.9	3,442.6	660.0	1,159.8	10,325.2
FY 2003	7,377.6	4,194.8	439.4	165.0	69.3	12,246.1
FY 2004	7,154.0	4,187.5	761.5	596.3	56.0	12,755.3
FY 2005	9,695.8 **	5,253.1	1,400.0	625.0	53.0	17,026.9
FY 2006	12,434.8 **	2,764.8	964.8	1,040.0	23.8	17,228.2
FY 2007	12,464.0 **	4,966.3	1,710.0	160.0	320.5	19,620.8
FY 2008	15,780.6 **	3,498.9	910.2	195.0	967.9	21,352.6
FY 2009	9,847.2 **	3,936.0	3,022.6	217.5	335.9	17,359.2
FY 2010	19,046.3	10,521.7	2,757.9	250.0	605.3	33,181.2
FY 2011	17,805.1	2,422.3	2,798.2	250.0	171.1	23,446.7
FY 2012	6,648.2	5,105.9	1,891.3	900.0	506.1	15,051.5
FY 2013	17,766.3	4,905.5	1,524.5	104.6	13.4	24,314.3
FY2014	11,930.5	6,521.6	2,177.5	128.5	581.6	21,339.7
FY 2015	<u>9,213.9</u>	<u>9,980.9</u>	<u>1,656.3</u>	<u>311.5</u>	<u>83.2</u>	<u>21,245.8</u>
Subtotal	\$ 200,148.1	\$ 109,891.9	\$ 44,881.6	\$ 8,641.5	\$ 6,220.6	\$ 369,783.7
Projects Planned for or Continued in FY 2016	\$ 62,661.9 **	\$ 12,508.2	\$ 6,115.8	\$ 620.0	\$ 64.0	\$ 81,969.9
Total	\$ 262,810.0	\$ 122,400.1	\$ 50,997.4	\$ 9,261.5	\$ 6,284.6	\$ 451,753.6
FY 1993 - FY 2015 Renovation Projects Which Include Correction of Significant Amounts of Deferred Maintenance***	\$ 132,946.4	\$ 98,777.3	\$ 126,290.0			\$ 358,013.7
Renovation Projects Planned or Continued for FY 2016 with Correction of Significant Amounts of Deferred Maintenance****	\$ 48,000.0	\$ 32,630.0	\$ 38,555.0			\$ 119,185.0
GRAND TOTAL	<u>\$ 443,756.4</u>	<u>\$ 253,807.4</u>	<u>\$ 215,842.4</u>	<u>\$ 9,261.5</u>	<u>\$ 6,284.6</u>	<u>\$ 928,952.3</u>
Total - By Source of Funds						
Building Renewal/Building Maintenance/General University	\$ 111,939.1	\$ 114,434.2	\$ 33,981.7	\$ 3,891.4	\$ 3,656.3	\$ 267,902.7
Building Renewal/Academic Building Revenue Bonds	52,728.3		83.5			52,811.8
Income from Treasurer's Temporary Investments (TTI)	17,451.4	11,353.7	1,450.2			30,255.3
Gifts, Grants	9,381.7	32,830.6	12,967.3			55,179.6
Utility Renewal and Replacement and Revenue Bonds	112,859.5	20,324.0	2,460.0			135,643.5
Academic Building Revenue Bonds; Project Notes	23,636.6	21,036.4	50,920.5			95,593.5
Acad. Bldg Rev. Bonds; Pre 1991 and 1991; and Project Notes		5,218.5	1,863.5			7,082.0
Academic Building Revenue Bonds; 1992	3,100.5	6,024.8	8,071.3		610.3	17,806.9
Academic Building Revenue Bonds; 1994, 1995, 2008	20,536.1	9,793.1	40,985.7			71,314.9
Capital and Special Appropriations	55,275.4	23,305.9	103,511.6	2,755.0	2,127.7	186,975.6
TTI, FY 96 Capital Appropriation, Utility Enterprise R & R	1,000.0					1,000.0
FY 96 Capital Appropriation, Utility Enterprise R & R	450.0					450.0
Agriculture Experiment Station & Cooperative Extension		1,175.2				1,175.2
Facilities Overhead Use Allowance	1,679.0	9,097.0				10,776.0
Building Repair / Treasurer's Temporary Investments	2,737.8	12,564.8				15,302.6
College of Medicine Gifts / Treasurer's Temporary Investments	2,468.4					2,468.4
College of Medicine Earnings and Gifts	1,645.9					1,645.9
Building Renewal / TTI	-					-
College of Medicine Earnings, Gifts / Treasurer's Temp. Investment	4,114.3					4,114.3
Other (includes unspecified combination of above fund sources)	<u>54,691.1</u>	<u>20,250.4</u>	<u>10,467.6</u>	<u>2,615.1</u>	<u>500.6</u>	<u>88,524.8</u>
GRAND TOTAL - INDIVIDUAL DEFERRED MAINTENANCE ITEMS AND RENOVATION COSTS	<u>\$ 443,756.4</u>	<u>\$ 253,807.4</u>	<u>\$ 215,842.4</u>	<u>\$ 9,261.5</u>	<u>\$ 6,284.6</u>	<u>\$ 928,952.3</u>

* SUI - includes projects approved and funded for FY 93 - FY 96; for FY 1993 also includes projects completed with Academic Building Revenue Bonds.
 ** Includes Oakdale campus; for FY 2008 includes deferred maintenance eliminated through demolition of International Center
 *** Renovation projects include SUI - Gilmore Hall, Schaeffer Hall, Phillips Hall, Bowen Science Building Microbiology, Medical Education Building, Hancher Auditorium, Engineering Building, Biological Sciences - Phase 2, Hydraulics Laboratory Modernization, Old Capitol, SUI-Chemistry and Old Music Renovations;
 ISU - Catt Hall, Laboratory of Mechanics, Gilman Hall and Systems Upgrade, State Gym, Beardshear Hall, Hamilton Hall, Physics Hall Auditorium, Carver Hall, Morrill Hall, Pearson Hall, Crop Genomics Info. Lab Remodel, MacKay, Office and Lab, and Snedcor Hall Renovations, Curtiss Hall - Phase 1, MacKay Hall Auditorium;
 UNI - Seerley, Wright and Lang Halls, and Commons Renovations, Steam Distribution System Replacement - Phase 1, Innovative Teaching and Technology Center, Science Building Renovation - Phase 1, Russell Hall Renovation, Gilchrist Hall Renovation/Restoration, Electrical Distribution System, Phases 1 and 2, Sabin Hall Renovation, Bartlett Hall Renovation
 ****Includes SUI-Dental Science Renovation; ISU-Lagomarcino and Marston Halls Renovation; UNI - Schindler Education Center Renovation

Strategies and Policies for Optimal Utilization of Existing Campus Facilities

(Adopted by Board of Regents, May 2006)

1. Institutions should be as thorough and innovative as possible in their allocation and reallocation of space within their existing physical plants.
2. Each university should adopt general principles, consistent with the Board's and each university's strategic plan, regarding space assignment and scheduling of classes and should so inform the campus community. Each university should also ensure that its policies and procedures regarding space are consistent with these principles.
3. The universities should use their appropriate campus committees to stimulate discussions on improving the utilization of campus space and facilities, and to provide recommendations to the university administration.
4. Space planning should continue to be an institutional responsibility and be part of comprehensive long range campus planning, which includes an analysis of the quality, quantity and location of the space.
5. Requests for new space should continue to be documented and justified on a functional need basis with a demonstration that the identified program need cannot be met more economically through more efficient use of existing space or renovation, consistent with the Board's previous adoption of the capital project evaluation criteria.
6. Each university should review its existing utilization data when planning for new or renovated space; to the greatest extent possible, objective measures should be used to determine space needs. These objective measures could include benchmarking data or objective models, supplemented by further analyses and specialized studies.
7. Each university should consider development of policies regarding office space for part-time employees, including adjunct faculty, graduate students and emeritus faculty.
8. Each university should keep and utilize for each new construction or renovation project guidelines for the size of offices.
9. Each institution should submit with its request to lease space in the general vicinity of the main campus, an explanation of the spaces on campus examined and found unsuitable.
10. Classrooms, class laboratories and other facilities should be designed and scheduled for optimal utilization given program needs and student expectations.
11. The universities should strive to design efficient facilities, providing for as much usable (net) square footage as reasonably possible within the gross square footage and program goals of the building.
12. For those facilities thought to be obsolete, the institutions should assess their buildings' physical condition, contribution to the university's heritage, adaptability to being efficiently renovated and reused, and viability of reuse versus replacement; based upon this assessment, each university should determine whether it is prudent to retain each of its obsolete structures.