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University of South Carolina  
BOARD OF TRUSTEES

Buildings and Grounds Committee

October 9, 2009

The Buildings and Grounds Committee of the University of South Carolina Board of Trustees met on Friday, October 9, 2009, at 10:00 a.m. in the Capstone House Carolina Room.

Members present were: Mr. Toney J. Lister, Chairman; Mr. Mark W. Buyck, Jr.; Mr. William C. Hubbard; Mr. William W. Jones, Jr.; Ms. Darla D. Moore; Mr. Othniel H. Wienges, Jr.; Mr. Miles Loadholt, Board Chairman; and, Mr. Eugene P. Warr, Jr.; Board Vice Chairman. Mr. Arthur S. Bahnmuller was absent.

Other Trustees present were: Mr. Herbert C. Adams; Mr. Chuck Allen; Mr. J. Egerton Burroughs; Dr. C. Edward Floyd; Mr. Greg Gregory; Ms. Leah Moody; Mrs. Amy Stone; and Mr. Mack I. Whittle, Jr.

Others present were: President Harris Pastides; Secretary Thomas L. Stepp; Vice President for Finance and Planning William T. Moore; Vice President for Academic Affairs and Provost Michael D. Amiridis; Vice President for Student Affairs and Vice Provost for Academic Support Dennis Pruitt; Vice President for Human Resources Jane M. Jameson; Vice President for Information Technology and Chief Information Officer William F. Hogue; General Counsel Walter (Terry) H. Parham; Associate Vice President for Resource Planning Edward L. Walton; Associate Vice President for Finance and Planning and University Budget Director Leslie Brunelli; Associate Vice President and Assistant Vice Provost for Administration Stacey Bradley; Associate Vice President for Facilities Tom Quasney; Associate Vice President for Housing and Student Development and Assistant to the Vice Provost for Special Projects, Gene Luna; Associate Vice President for Student Life and Development Jerry Brewer; Associate Vice President for Transportation Derrick Huggins; Chancellor of USC Aiken Thomas Hallman; Chancellor of USC Beaufort Jane Upshaw; Chancellor of USC Upstate John Stockwell; Director of Athletics Eric C. Hyman; Director of Facilities Planning and Construction Jeff Lamberson; Director of Capital Budgets and Financing Charlie Fitzsimons; Executive Associate Athletics Director Kevin O'Connell; Chief Financial Officer, Department of Athletics, Jeff Tallant; USC Aiken Assistant Chancellor, Director of Operations, Mike Jara; Assistant Dean of Academic Planning, College of Arts and Sciences, Sonja Brown; Director of the Office of Media Relations, Division of University Advancement, Margaret Lamb; Director of Periodicals, University Publications, Chris Horn; Executive Assistant, Facilities Planning and Construction, Donna Collins; Heather Mitchell, The Boudreaux Group; University Technology Services

Production Manager, Justin Johnson; and Board staff members Barbara Salmons and Terri Saxon. No members of the media were present.

Chairman Lister called the meeting to order and stated that notice of the meeting had been posted and the press notified as required by the Freedom of Information Act; the agenda and supporting materials had been circulated to the members; and a quorum was present to conduct business.

Chairman Lister stated that there were contractual matters related to gift naming opportunities, which were appropriate for discussion in Executive Session. Mr. Hubbard moved to enter Executive Session and Mr. Jones seconded the motion. The vote was taken, and the motion carried.

The following persons were invited to remain: President Pastides, Secretary Stepp, Dr. Moore, Dr. Amiridis, Ms. Jameson, Dr. Pruitt, Dr. Hogue, Mr. Parham, Mr. Walton, Ms. Brunelli, Mr. Quasney, Ms. Lamb, Mrs. Salmons, and Mrs. Saxon.

#### Return to Open Session

##### I. Administrative Organization:

Chairman Lister recognized President Pastides. The President presented his new administrative organization which included the Finance and Planning Division, and the Facilities and Campus Management Division. The Finance and Planning Division would be headed by Vice President for Finance and Planning Dr. William T. Moore. Reporting to

Dr. Moore would be Ms. Shirley Mills and Mrs. Casey Martin of Legislative Liaison and Community Relations. Also reporting to Dr. Moore is the Vice President for Information Technology Dr. Hogue, the Associate Vice President for Resource Planning Mr. Walton, the Associate Vice President for Finance and Planning and University Budget Director Ms. Brunelli, and the Associate Vice President for Business Affairs Ms. Zeigler.

A search was currently underway for the new position of Vice President for Facilities and Campus Management, which Dr. Moore was filling on an interim basis. Reporting to this new position is the Associate Vice President for Facilities Mr. Quasney, the Associate Vice President for Transportation Mr. Huggins, the Associate Vice President for Law Enforcement and Safety Mr. Ellis, the Associate Vice President for Health and Safety Mr. Syfert, and in a newly created position the Director of Sustainability Mr. Koman.

President Pastides stated that Vice President Pruitt was chairing the Vice President for Facilities and Campus Management search committee, and that over 100 candidates had applied.

Chairman Lister stated that this report was received as information, and he called on Dr. Moore for the next agenda item.

## II. Building a Capital Plan:

Dr. Moore stated that the Capital Plan was a plan for short-term and long-term investments such as new or replacement infrastructure projects, deferred maintenance, renovations and up-fit. The Plan was arranged according to a timing schedule and consistent with resource constraints. It evolved from the University's Strategic Plan, *Focus Carolina*, which was the system-wide strategic plan to inform senior leadership as to mission priorities and infrastructure needs. The Capital Funding Plan and the Facilities Master Plan work in unison to accomplish the Capital Plan.

As a Presidential advisory committee to support the Capital Plan, the University Capital Planning Committee was created to review capital requests, develop an annual capital plan, review space allocation requirements, and make recommendations to the President on future capital investments. The Committee would be co-chaired by Dr. Moore and Dr. Amiridis. Other Core Committee members were Dr. Pruitt, Mr. Quasney, Dr. Kresovich, and Dean Fitzpatrick representing the Council of Academic Deans. It was contemplated that the chair of the Buildings and Grounds Committee would serve as an Ex-Officio Member. Ad Hoc members included the General Counsel, Vice President for Information Technology, Vice President for Human Resources, Athletics Director, Parking and Transportation, Faculty Senate Chair, Student Government President, and others dependent on the project for consideration.

To provide analytical support for the Capital Planning Committee a Capital Operations and Planning Subcommittee (COPS) was created, which was tasked to examine capital proposals in depth and make recommendations to the Committee. Members of COPS

included Mr. Walton (Resource Planning), Stacey Bradley (Student Affairs), Tom Quasney (Facilities), Sonya Brown (Deans' Representative), Charlie Fitzsimons (Capital Finance), and Jeff Lamberson (Facilities Planning and Construction).

III. Long-range Financial Planning:

Dr. Moore discussed the current economic environment in terms of long-term borrowing, and the tax-exempt credit spreads which had widened significantly over the past 18 months, especially for institutions related below the "AA" level.

In addition, Dr. Moore and Mr. Fitzsimons explained the University's Debt Profile; Credit Determinants and Debt Capacity Considerations; Capital Inflows and Cumulative Reserves Compared to Outlays; and Capital Inflows and Outlays over the next ten years.

Mr. Fitzsimons reported that in the year 2016, one of the University's State Institution Bonds would mature and be retired, creating the University's next opportunity for a substantial increase in borrowing, unless the University changed its debt service level. The University's current debt service was at approximately \$30 million a year, which represented about 5 percent of the University's system-wide annual operating budget. As of the end of the 2008-2009 fiscal year, the University had \$370 million in outstanding debt, at a weighted average cost of capital (WACC) rate of 4.61 percent, and the average life of 12.8 years. When asked, Mr. Fitzsimons responded the University was at its highest debt level ever.

Mr. Fitzsimons noted that Barclays Capital primary role was as the University's underwriter, by which they managed the University's Debt Management and Issuance of the Debt. Barclays also handled the University's special projects, including the new Moore School of Business.

IV. Action Items:

A. Project Status Update: Mr. Quasney noted the projects completed since the last Committee meeting in April 2009. Construction of the Honors Hall was completed at \$47 million. Although new construction did not reduce the University's deferred maintenance, the new Hall allowed for a \$26 million reduction in deferred maintenance by demolition of the old dormitories on the site. Currently, there still remained approximately \$600 million in deferred maintenance in the University System.

Other project completions included:

- Construction of the Band/Dance Facility, which finished ahead of schedule, the USC Upstate Magnolia Hall, and the USC Upstate Health Education Complex;
- Renovation of Gambrell Hall, Sumwalt Trace Metals Lab, Capstone Top of Carolina, Williams-Brice Stadium (WBS) Level 200 Suites, USC Upstate Palmetto Villas, and the USC Aiken Student Center Kitchen;
- Expansion of the Sumwalt Nanocenter Lab, and the Hobcaw Education Center, a \$3 million grant funded project;

- Upgrades to the School of Medicine (SOM) Animal Facility, WBS Electrical System, and USC Aiken Pacer Downs;
- Replacement of the Preston HVAC, Rutledge Fire Protection, and Stone Stadium Field;
- Installation of the SOM Building #4 Chiller;
- Abatement of Jones Physical Science Center (PSC) South Asbestos on Floors 1-3;
- Waterproof of the Williams Brice Stadium West Side Stands.

Mr. Quasney stated that all projects were completed within their budgets, and most were completed either on schedule or ahead of schedule.

Mr. Lamberson reported on the projects currently under construction: Upfit of the Jones PSC Floors 4-6, and the Horizon I second and third Floor; addition of the Thomas Cooper Library (TCL) Special Collections addition; Emergency repairs of the TCL exterior; replacement of the TCL roof; and the construction of the Academic Enrichment Center and the WBS Recruiting Lounge. These projects, totaling approximately \$50 million, are scheduled for completion between November 2009 and March 2010.

Chairman Lister stated that this report, along with the first three agenda items were received as information.

Following a brief recess, Chairman Lister called the meeting back to order and called on Dr. Moore to present the Phase I Project Approval requests.

B. Project Approval (Phase I):

1. Construct Darla Moore School of Business: The University determined that to provide for growth and development of the Darla Moore School of Business, and to continue the excellence of its nationally recognized International Business and other undergraduate and graduate programs, a new facility should be constructed in the Innovista District. It was proposed that the new facility would consist of approximately 200,000 - 300,000 square feet and feature state-of-the-art classroom and meeting space, modern faculty and staff offices, and common areas needed to support the important mission of the Darla Moore School.

The anticipated budget for the project was \$90 million to be funded with debt service from National Advocacy Center (NAC) lease payments, University Funds, and Private Gifts. Approval was requested to fund only the initial design and development of a cost estimate for the project.

Chairman Lister called for a motion to establish this project for Phase I Design with a budget of \$1.35 million funded with Private Funds. Mr. Loadholt so moved and Mr. Buyck seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

2. Upfit Horizon I First Floor IDEA Lab: This project was to upfit the first floor of the Horizon I Building. The upfit would provide space for the Innovista Wet-Lab Incubation Facility. It would include 20 labs in a total space of between 14,000 and 16,000 square feet.

The anticipated budget for the project was \$2 million and would be funded with EDA (Economic Development Administration) grant funding, University funds, and other funds. Approval was requested to fund only the initial design and development of a cost estimate for the project.

Chairman Lister called for a motion to establish this project for Phase I Design with a budget of \$30,000 funded with University Funds. Mr. Warr so moved and Mr. Wienges seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

3. Upfit Discovery I - Arnold School of Public Health (ASPH):

This project would upfit approximately 40,000 square feet of space in the Discovery I building. The completed space would be used to relocate the office functions of the ASPH that currently occupy the Health Sciences Building (located at the corner of Greene and Sumter Streets).

The anticipated budget for the project was \$10 million, to be funded from Grant Generated Funds. Approval was requested to fund only the initial design and development of a cost estimate for the project.

Chairman Lister called for a motion to establish this project for Phase I Design with a budget of \$150,000 funded with Grant Generated Funds. Mr. Jones so moved and Mr. Hubbard seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

4. Renovate Maxcy: Maxcy College was constructed in 1937. It is a four story co-ed dormitory with double room suites, containing approximately 45,000 gross square feet (gsf), and houses approximately 180 South Carolina Honors College freshmen.

Renovations to Maxcy would convert it to an International House Living Learning Center for students. The renovations would include the kitchen, creation of a scholar-in-residence suite, and creation of faculty offices.

In addition, since HVAC calls were one of the leading categories of student complaints, air conditioning was added to the facility. However, the current system does not always address humidity control. This leads to the residents experiencing discomfort and contributes to mold growth. Advancements in technology allow for more environmental control and efficiency in operational cost.

This project was a request to move forward with investigating replacement of all fan coil units and installation of new air handlers and energy recovery units.

The anticipated budget for the project was \$3.75 million. Approval was requested to fund only the initial design and development of a cost estimate for the project.

Chairman Lister called for a motion to establish this project for Phase I Design with a budget of \$56,250.00 funded with Housing Maintenance Reserve Funds. Mr. Buyck so moved and Mr. Hubbard seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

5. Renovate Harper/Elliott: Harper/Elliott College, constructed in 1848, serves as a co-ed dormitory, with two and four bedroom apartments. It houses approximately 48 Upperclass Honors students.

A project to install a fire suppression system and enhance student safety was recently completed. The proposed project would complete a comprehensive renovation that would address interior refurbishment (installation of new interior finishes including kitchen and toilet millwork and fixtures) as well as upgrades/replacement of plumbing, mechanical and electrical systems. Window replacement and exterior repairs would also be included in the project.

The project would address items required to maintain the facility while being mindful of aesthetic requirements to help USC retain its competitive advantage in recruiting new students. This renovation is intended to be the prototype for renovations to other housing facilities located on the Historic Horseshoe in future years.

The anticipated budget for the project was \$3.75 million. Approval was requested to fund only the initial design and development of a cost estimate for the project.

Chairman Lister called for a motion to establish this project for Phase I Design with a budget of \$56,250.00 funded with Housing Maintenance Reserve Funds. Mr. Buyck so moved; Mr. Hubbard seconded the motion; the vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

6. USC Aiken - Construct Pedestrian Bridge: The Roberto Hernandez Baseball Field and the Convocation Center are located on property west of the main campus, creating potential safety issues for students attending athletic events, concerts, and community activities at these facilities. The Robert Bell Highway, which separates these facilities from the main campus, is a 55-mile per hour major throughway.

The campus has plans for an elevated walkway that would span the highway and provide safe passage between the two campus areas. It is anticipated that the crosswalk would need to be high enough to permit unrestricted traffic flow below it, as well as wide enough to permit planned expansion of the highway in years to come.

The anticipated budget for the project was projected to be as much as \$1 million. Approval was requested to fund only the initial design and development of a cost estimate for the project.

Chairman Lister called for a motion to establish this project for Phase I Design with a budget of \$15,000 funded with USCA Institutional Funds. Mr. Loadholt so moved and Mr. Buyck seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

7. USC Upstate - Renovate/Add to Hodge Building: The Hodge Center, constructed in 1973, currently contains 81,640 gsf. A feasibility study that evaluated the options of constructing a new facility and the options to renovate and expand the current building was complete. Based on the study, it was decided to expand and renovate the current facility.

The proposed project would renovate major portions of the building; expand the building by approximately 9,000 square feet; and correct several deferred maintenance items. The project would expand the gym and modernize athletic services areas, building entrances, and classrooms. The deferred maintenance work would principally address the HVAC and electrical systems.

The exact scope and budget would be determined during Phase I planning.

The anticipated budget for the project was projected to be between \$7-9 million. Approval was requested to fund only the initial design and development of a cost estimate for the project.

Chairman Lister called for a motion to establish this project for Phase I Design with a budget of \$130,000 funded with Private Funds. Mr. Jones so moved and Mr. Loadholt seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

C. Project Approval (Phase II):

1. Abate Jones PSC North: This project would address the remediation of existing asbestos (above the ceiling) in approximately 70,000 square feet of the Jones Physical Sciences Building, to include work in the north wing and the basement of both the north and south wing.

The scope of work would include removal of the existing suspended ceilings, light fixtures, and fireproofing containing asbestos. After demolition was completed, new ceilings, light fixtures, and two hour protection on the structural steel would be installed. Existing floor and wall finishes would be repaired as necessary.

Work would be coordinated with the Registrar and College of Arts and Sciences to relocate building occupants as required during construction.

Chairman Lister called for a motion to fund Phase II Construction for \$5,450,000 for a total project budget of \$5.5 million to be funded with American Recovery and Reinvestment Act grant. Mr. Hubbard so moved and Mr. Loadholt seconded the motion.

Mr. Hubbard asked if this project would address the remainder of any asbestos in the Jones PSC, and Mr. Quasney responded that yes, except for "encapsulated asbestos" that would not be able to enter any duct work or open areas within the facility.

The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

2. Renovate and Replace DeSaussure Fire Protection:

DeSaussure College, constructed in 1809, is the second oldest building on the Columbia campus. The facility requires the installation of a fire protection system and general renovation. The building contains approximately 25,000 gsf; and is a mixed use facility combining student housing (15,000 gsf) with education and general space (10,000 gsf). The central portion of the building is occupied by the College of Social Work.

The scope of work would consist of installation of a new fire protection system, fire alarm upgrades, emergency lighting, door and window upgrades, HVAC/electrical/plumbing upgrades, kitchen and toilet renovations, and interior finishes and trim.

These new improvements would enhance student living conditions as well as modernize the building to meet current life safety code requirements.

The Phase I Budget was \$350,000. The anticipated project completion date was scheduled in three phases: Summer 2010, Fire Protection System; Summer 2011, HVAC, Mechanical and Electrical Repairs; Summer 2012, Windows, Kitchens and Bathrooms.

Chairman Lister called for a motion to fund Phase II Construction for \$4,477,000 for a total project budget of \$4,827,000 to be funded with \$3,909,870 from Housing Maintenance Reserve Funds, and \$917,130 from Institutional Capital Project Funds.

Mr. Wienges so moved and Mr. Loadholt seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

3. Renovate Williams-Brice Stadium West Side Suites: This project would renovate eighteen Executive Suites and five Club Areas on the west side of Williams-Brice Stadium. Renovations would include new carpet, ceilings, lighting fixtures, plumbing fixtures, seating, wall coverings, casework, HVAC, furniture, stadium seats and handrails/stair treads.

In addition, this project would renovate the club area on the 600 level of Williams-Brice Stadium. Work would include installation of new interior finishes (carpet, wall, ceiling) and modifications to the Television Press Broadcasting Area. The window façade would be modified to replace existing fixed glass with operable windows. It is planned to perform this work prior to the 2010 football season.

Chairman Lister called for a motion to fund Phase II Construction for \$3,058,000 for a total project budget of \$3.1 million to be funded with Athletic Operating Funds. Mr. Buyck so moved and Mr. Jones seconded the motion.

Dr. Floyd questioned whether the project was needed. He said he understood replacing the carpet, but unless the \$3 million was being spent on new suites that would generate new revenue he questioned the need for the project as presented. Mr. Hubbard responded that the driving force behind the project was based on survey responses of current suite holders who expressed their complaints about the current condition of the project area.

Mr. Tallant added that the area being renovated currently brought in approximately \$2 million annually and had been 100 percent occupied the prior season.

The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

D. Other Approvals:

1. Project Increase - USC Upstate Renovate Palmetto Villas - Part 2:

This project was initially approved in April 2007, as one component of the USC Upstate Housing Acquisition, Construction, and Renovation Project. The total project budget was \$36,050,000 with \$2 million allocated to renovations of Palmetto Villas. With the substantial completion of the project for the construction of the New Residence Hall, it was determined that there would be funds remaining in the project. The request was for some of these funds to be used for additional renovations to the Palmetto Villas.

The renovations included in the original project scope were completed. These included upgrades to restrooms and living areas including carpet replacement, wall and flooring repairs, painting, fixture and furniture replacement, improvements to smoke and fire detections systems, and improvements to the laundry and support services area.

The additional funding would be used to continue renovations and improvements to the 12 units in the existing housing facility. The planned work included renovations to the exterior appearance of the buildings, roof replacement, creation of a central service area for the Villas (mail, laundry, activity area, etc.), parking lot improvements including replacement of curb, gutter and paving, and construction of additional parking. As funding allowed, mechanical systems in the units would also be replaced.

Chairman Lister called for a motion to increase the existing project budget by \$1.5 million funded with USC Upstate Housing Revenue Bonds. This would result in a total project budget of \$3.5 million funded with USC Upstate Housing Revenue Bonds. Mr. Wienges so moved and Mr. Loadholt seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

2. Small Projects:

a. Replace Bates House Roof: Bates House, constructed in 1969, houses more than 500 freshmen and contains approximately 140,000 gsf. The building's flat roof is at the end of its useful life cycle. The current Ethylene Propylene Diene Monomer, a synthetic rubber type roof has a short life cycle when compared with other roof types. It would be replaced with a modified bitumen type that would continue to be leak free and prevent structural damage.

The budget for the project was \$495,000 and would be funded with Housing Maintenance Reserve Funds.

b. Replace Blatt Physical Education Center Lighting:

The Blatt Physical Education Center Natatorium opened in 1976 was experiencing significant issues due to its age, which created potential safety and operational issues that need to be addressed. A feasibility study was conducted to identify specific issues, provide recommendations, and develop preliminary cost estimates.

The Natatorium serves many functions. It is the home facility for the University intercollegiate swimming and diving teams, and host to numerous community and regional swim meets. It also serves as the academic classroom for physical education and exercise science classes and is used by faculty, staff, students and alumni for exercise and recreational swimming. In addition, it provides numerous local organizations with a facility to host aquatic activities that do not exist elsewhere in our community.

The existing lighting system does not produce sufficient lighting levels, the maintenance is difficult, and the equipment is in poor condition. This project would replace the lighting in the pool area: to address the ease of maintenance, provide for lighting finishes rated for natatorium settings and corrosion resistance; and for improved lamp life.

The budget for the project is \$495,000 and would be funded with Student Services Operating Funds.

c. Replace Blatt Physical Education Center Pool Deck:

The existing pool deck consists of ceramic tile floor which slopes to evenly spaced floor drains. The existing floor slope and drains do not shed all water, leaving standing puddles which result in a consistently damp, slick surface posing safety issues. The proposed solution would replace the tile with slip resistant tile and increase the slope of the deck to a central trench drain.

The budget for the project is \$495,000 and would be funded with Athletic Funds.

d. Upgrade USC Aiken Electrical Distribution Upgrade:

This project would upgrade components of the electrical distribution system on the USC Aiken Campus. Existing high voltage underground switch gear and bus ducts were extremely difficult to service due to confined space conditions, water infiltration, and lack of accessibility. Local utilities refused to consider a service contract on this equipment due to equipment age and inherent safety concerns.

To ensure long-term reliability of electrical distribution systems, this equipment would be replaced with above ground stations that could be properly maintained by a qualified electrical services provider.

The budget for the project is \$400,000 funded with Federal Stimulus (American Recovery and Reinvestment Act) Funding. Interim funding for the initial planning for the project would be funded with \$15,000 from USCA Institutional Funds.

Chairman Lister called for a motion to approve these four small projects with the budgets and funding sources as listed: Replace Bates House Roof (\$495,000) with Housing Maintenance Reserve Funds; Replace Blatt Physical Education Center Lighting (\$495,000) with Student Services Operating Funds; Replace Blatt Physical Education Center Pool Deck (\$495,000) with Athletic Funds; and Upgrade USC Aiken Electrical Distribution (\$400,000) with American Recovery and Reinvestment Act Funding.

Mr. Buyck so moved and Mr. Loadholt seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

d. Energy Efficient Stimulus Funding Projects:

The South Carolina Energy Office (SCEO) received \$45.7 million in stimulus funds for state agencies, school districts, public colleges and universities. Of this total, \$12.2 million was designated for the state's two- and four-year colleges.

The SCEO allocated these funds based on energy consumed by agency facilities in FY 2006. Seventy-five percent of each agency's allocation would be issued as a grant, and twenty-five percent would be a loan to be paid back from energy savings. Agencies were required to submit applications for their allocations by September 1, 2009. All awards must be expended by December 2010.

USC Columbia was allocated \$2.8 million, of which \$2.1 million was a grant and \$700,000, a loan.

These stimulus funds must support planning and implementing energy efficiency and renewable energy projects. Specifically, requests must be either:

- An energy efficient device, technique or technology designed to reduce energy consumption, peak demand, and/or utility costs at an existing building or facility;
- A device, technique or technology designed to use energy from renewable sources (such as solar, wind, biomass, hydropower) in place of energy from fossil fuels, or;
- Alternative fuel or advanced technology vehicles and alternative fuel infrastructure.

Overall, projects must have a payback period of eight years or less, or a simple Return on Investment of 2.5 or greater. Exceptions could be reviewed for a possible waiver of these standards. An agency's application must be consistent with its Energy Conservation Plan.

USC Columbia facilities and finance staff analyzed various prospective energy efficient and renewable energy projects to determine implementation cost, projected annual cost savings, projected reduction in energy consumption and time required to complete each project. The following criteria were used in selecting recommended projects:

- The first criteria addressed was that a project had to meet the requirement of a payback period of 8 years or less or an overall return on investment of 2.5 or greater.
- Because projects must be completed by December 2010, focus was on projects that could be priced below \$500,000 since these would not be subject to approval processes outside of the University's system.
- Projects were selected that have the greatest energy savings and thus the highest payback as well as projects that had a high visibility.

The following is a list of recommended projects to be included in the USC Columbia energy stimulus funds request application. This recommended list consists of a good mix of projects that are primarily energy cost related.

i. Retrofit Lab Fume Hoods: This project would upgrade twenty-eight (28) lab fume hoods to reduce energy consumption. Most fume hoods on campus operate 24/7 and many have constant air flow and excessive air loss when not in use due to the hood sash being left in the open position. This project would install new automated hood sashes that would close when the hood was not in use. The hood has sensors to detect if something was under the sash and would not allow it to close until the opening was clear. Energy was saved by reducing air loss and thus, lowering the heating and cooling requirements for the space. The following areas were chosen for this project phase based on their older type hoods and constant volume HVAC systems: Swearingen Annex (20 units); Sumwalt Engineering (5 units); and Blatt Physical Education Center (3 units).

The project cost was estimated at \$300,000 and the energy savings at \$82,894. The payback was estimated at 3.6 years.

ii. Install Lighting Controls and Sensors:

This project would install automated lighting control panels and occupancy sensors in six USC campus facilities (Darla Moore School of Business, Nursing, School of Music, Gambrell Hall, 1600 Hampton Street, and the Blatt PE Center). Facilities were selected based on their large size, occupancy schedule, ease of project installation and noted locations where lights were being left on at night. Large classrooms and auditoriums would have occupancy sensors to turn lights off when not in use and the remaining building areas would be connected to automated lighting control panels (i.e. digital time clocks) and scheduled off based on building occupancy schedules. System override switches would be conveniently located on each floor to allow building occupants to turn lights on after normal working hours when necessary.

The project cost was estimated at \$490,000; and the energy savings estimated at \$89,593. The payback was estimated at 5.5 years.

iii. Install Central Chilled Water Air Separators at Plants: This project would install automatic air separators on the central chilled water distribution system in each of the three central energy plants. Air is a very good insulator and is used in double pane, energy

efficient glass windows to prevent the transfer of heat. However, in a chilled water system, which has about 10 percent air, the project would improve the transfer of heat from the water to the cooling equipment (chillers) in the plant. Removing the air from the water makes the cooling process much more efficient and saves energy. It also allows the chilled water to extract heat from the campus building's air handlers more efficiently, thus saving energy in each facility that uses chilled water.

The project cost was estimated at \$350,000; and the energy savings estimated at \$50,000. The payback was estimated at 7 years.

iv. Add Variable Speed Drive on Water Pumps at Plants:

This project provides for the installation of electric variable speed drive units on eight condenser water pumps located in the four central energy plants. These variable speed drives would be installed on the pumps that work with the plant's chilled water system. Currently these pumps operate at 100 percent speed whenever they operate. The pump motors are large and range from 150 horsepower to 300 horsepower each. The speed drive units would reduce the pump's speed to correspond to the actual cooling load as it varied throughout the day, thus saving energy.

The project cost was estimated at \$336,887; and the energy savings estimated at \$48,127. The payback was estimated at 7 years.

v. Upgrade Existing EMS Control and Install Meters:

This project would install steam, chilled water, and electric sub-meters in twelve large USC Housing dormitory facilities to provide accurate billing of utilities. Facilities to be metered would be West Quad, East Quad, South Quad, Bates House, Cliff Apartments, Capstone, Columbia Hall, South Tower, Maxcy, Sims, McClintock and Wade Hampton. These digital meters would be connected to the campus's existing central energy management system (EMS) for remote monitoring and recording. Current utilities for steam and chilled water were estimated based on the "average campus use" and not the actual consumption which was estimated to be higher. Money would be saved by working with Housing to reduce their cost once consumption could be accurately monitored and tracked on a real time basis. Real time information on consumption could be used to alter student behavior and to improve system maintenance and operating efficiency.

The project cost was estimated at \$300,000; and the energy savings estimated at \$42,857. The payback was estimated at 7 years.

vi. Retrofit Parking Garages with LED: This project would Retrofit the lighting in the 1600 Hampton Street, Bull Street, and the Darla Moore School of Business parking garages. The existing high wattage, high pressure sodium lighting would be replaced with new low wattage, energy efficient, LED (Light Emitting Diode) light units. These units use much less energy, have a whiter light, and last four times as long.

The project cost was estimated at \$495,000; and the energy savings estimated at \$62,771. The payback was estimated at 7.9 years.

Chairman Lister called for a motion to approve the six energy efficient stimulus funding projects with the budgets as listed below:

Retrofit Lab Fume Hoods	\$300,000
Install Lighting Controls and Sensors	\$490,000
Install Central Chilled Water Air Separators at Plants	\$350,000
Add Variable Speed Drive on Water Pumps at Plants	\$336,887
Upgrade Existing EMS Control and Install Meters	\$300,000
Retrofit Parking Garages with LED	\$495,000

All projects would be funded with American Recovery and Reinvestment Act Grant and Loan Funds.

Mr. Jones so moved and Mr. Wienges seconded the motion. The vote was taken and the motion carried.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

At 12:30 p.m. Chairman Lister called for a lunch recess.

At 1:35 p.m. Chairman Lister called the meeting back to order and called on Dr. Moore to present the Other Business items.

E. Other Business:

1. Fire Protection Initiatives: At present, 75 percent of the 7,587 resident beds at USC (approximately 5,700) are located in buildings with automatic sprinkler systems. In the buildings undergoing sprinkler system upgrades there are approximately 1016 beds; once completed the percentage would increase to 88. The goal of 100 percent was on track and all projects were scheduled for completion by year 2013.

Mr. Jones asked whether a residence hall having or not having automatic sprinkler systems was a deterrent in recruiting students to live on campus and Dr. Pruitt responded that it had not been so far. He explained that they pledged in student recruiting and orientation that the University was moving toward seeing that 100 percent of residence halls were equipped with automatic sprinkler systems.

There are 2,372 resident beds on the other three four-year campuses and currently 83 percent of those facilities were equipped with automatic sprinkler systems. The remaining 17 percent was scheduled for completed by 2013.

Dr. Moore noted that the University Columbia Campus had four State certified fire marshals on staff, and four fire drills were held annually in each residence hall.

2. Student Health Center Feasibility Study: The completed study estimated the cost to build a new facility at approximately \$44 million, on a site

adjacent to the current facility. Currently \$8-9 million in student fees was available for the construction, which would leave a remaining debt of approximately \$35 million.

A source of funds for the construction needed to be determined and an increase in student health fees was anticipated.

Mr. Hubbard asked why the Student Health Center was not open 24/7. Dr. Luna responded that they had tried extended hours and weekends and found that there was not enough traffic through the center. However, a first responder was on duty during the times the Center was closed, and was dispatched on campus when needed.

3. SCANA Property: The Capital Planning Committee was assessing and evaluating the SCANA Property as a potential site for a second Greek Village, an athletics field, or combination of both; or the relocation of the Facilities Department. Thirteen parcels, approximately 29 acres were included in the property.

There were two appraisals of the property that differed greatly. The appraisal done by USC was \$4.9 million, and the one done by SCANA was \$13.8 million. The issue at hand was that the University, being a State Institution, was required by the Budget and Control Board to purchase at the lowest price, the \$4.9 million. SCANA's regulatory body, the Public Service Commission, precluded SCANA from selling the property for less than \$13.8 million.

Mr. Hubbard asked for the dates of the two appraisals. Mr. Quasney responded that the dates were both around the same time; however SCANA included in their appraisal the impact of the recent apartment complex at the corner of Whaley and Assembly Streets.

4. Biomass Plant: The new facility was not running and they were working with Johnson Controls to overcome some regulatory, technical, safety, and operating issues.

Mr. Hubbard questioned whether the plant had ever been on-line. Mr. Quasney explained that it had, but never for more than a month at a time due to continual problems.

Mr. Jones noted that federal stimulus funds were available for alternative energy sources. He asked that since the plant had never been fully on-line, if staff could pursue these funds in an effort to recover some of the money lost during the delay. Dr. Moore responded that they would explore the University's options concerning those funds.

5. Master Planning: A contract renewal with Sasaki was being prepared for the Board's consideration. In it Sasaki would continue work on the University's Master Plan, with completion expected in Summer 2010. Under the renewal, Sasaki would also conduct space studies to help the University make the best use of its current space, and analyze the "transportation flow" on campus.

6. Innovista: President Pastides stated that the University's General Counsel expected the termination agreement to be completed within ten days. In

the meantime, he said he had been working to establish the new Economic Development Council, which would "jumpstart" Innovista.

V. Upcoming Items:

A. Design Review Committee: Dr. Moore reported that a Design Review Committee meeting would be scheduled in the near future to consider: the Athletic Village Infrastructure; Athletic Venues; Athletic Village Garage and Maintenance Facility; Athletic Coaches Support Building; and Patterson Hall.

Dr. Moore listed the Design Review Committee members: Chairman of the Buildings and Grounds Committee, Toney Lister; Board of Trustee Chairman Designee, Mark Buyck; Presidential Designee, William Hubbard; Alumni Representative, Bill Bethea; Vice President for Finance and Planning, Ted Moore; Consulting Engineer, Jerry Suddeth; Consulting Architect (LEED Accredited), Deborah Snow; and South Carolina Landscape Architect (Retired), Ed Pinckney. Also, depending on the specific project, the Dean or Vice President responsible for the particular project area would join the Committee.

B. Phase I Approvals: Dr. Moore stated that once funding for the Student Health Center was determined, it would be presented for Phase I approval. Also, proposed for Phase I approval in the near future was the restoration of the Spigner House as an entertainment venue (especially for the Alumni Association) to be operated by Sodexo. Negotiations related to Sodexo funding the project were on-going.

C. Phase II Approvals: The projects scheduled for Phase II consideration in the near future are as follows: Upgrade Columbia Campus Elevators; Install Backup Power to Computer Annex; Replace Davis College HVAC; Streetscape South Sumter Street; Upgrade Woodrow Façade and Windows; Develop Farmer's Market; Upfit USC Beaufort Library 2<sup>nd</sup> Floor; and Construct USC Upstate Track and Field Complex.

VI. The Future:

A. Annual Capital Budget: The Capital Planning Committee planned to submit annually a proposed Capital Budget to the President and the Board for approval, and to provide quarterly updates on the budget.

B. New Policy on Capital Planning: The new policy would be more general as a Capital Planning Policy, not just a debt management policy.

C. SACS Compliance: Work was in progress on SACS compliance related to facilities and capital planning.

Mr. Burroughs requested a copy of the University's estimated \$600 million in deferred maintenance list, and Dr. Moore said that he would see that he got a copy. Dr. Moore noted that they planned to include at least \$2 million annually in the Capital Plan for deferred maintenance, which he said was not enough, but a start.

Mr. Burroughs asked if the University hired a construction manager for large projects like the Darla Moore School of Business, or handled the management internally. Mr. Quasney responded that they considered each project individually as to whether they

should handle the construction management in-house or out-source the work. He added that out-sourcing costs approximately one to three percent of the total project cost.

At President Pastides' request, Mr. Quasney outlined the process for hiring an architect, and for design review for large projects like the Darla Moore School of Business.

Mr. Hubbard asked that the Committee be provided as explanation as to why a certain methodology was used in their recommendations to them, so that they can be prepared to address questions from their constituents related to specific projects.

Also at President Pastides' request, Mr. Quasney explained the difference between the "Design, Bid, Build," and the "Construction Management at Risk" construction methodologies that they used.

Mr. Burroughs asked for clarification on the priority process for projects system-wide. President Pastides responded that he would explain how it would be done in the future, not how it had been done in the past. From this point forward the Provost would have an important role, always guided by academic needs. Proposals from each campus would be presented to the Capital Planning Committee, who would, upon careful consideration, forward their priority recommendations to the President for his approval, then ultimately to the Buildings and Grounds Committee and the full Board.

Ms. Moody asked for a brief description of the project procurement process. Mr. Quasney explained that once a project over \$500,000 was identified and prioritized, the staff, based on State regulations, estimated 1.5 percent of what they thought the project would cost. That figure was then submitted for approval to establish the project for Phase I design to two Commission on Higher Education Committees, the State Joint Board Review Committee, the State Budget and Control Board, the University of South Carolina Buildings and Grounds Committee, and the Full Board.

Following all six approvals, the project was then presented at all six levels for Phase II Construction approval.

Mr. Gregory asked if the University had a "wish list" for a State Bond Bill, should one be initiated, and Dr. Moore responded yes.

Chairman Lister stated that the report was received as information.

VII. Other Item:

- Gift Naming Opportunities:

Chairman Lister explained that the following Gift Naming Opportunities were presented in Executive Session without objection:

1. School of Law:
  - a. "The Honorable J. Michelle Childs Career Services Interview Room"
  - b. "The Jones, Patterson, Simpson & Newton, P.A. Library Study Room"
  - c. "The Kathryn A. Bockman Library Carrel"
  - d. "The Dennis J. Connolly Library Carrel"
  - e. "The Jean P. and Ray L. Derrick Library Carrel"

- f. "The Justin A. Thornton Law Fund"
  - g. "The Buyck Family Gervais Street Lobby"
  - h. "The Francis X. McCann Library Carrel"
  - i. "The Senator Edward Eli Saleeby Sr. Jury Room"
2. University Libraries
- "The Dr. Edwin E. Gordon Archive"
3. USC Sumter
- "The Karen Harris-Sweetman and Mark D. Sweetman Staff Office"

Chairman Lister called for a motion to approve the gift naming opportunities as presented. Mr. Loadholt so moved and Mr. Hubbard seconded the motion. The vote was taken and the motion carried. Mr. Jones abstained from voting, and Mr. Buyck abstained from all discussion in the Gift Naming Opportunities Committee.

VIII. Adjournment:

Mr. Wienges told Mr. Stepp, "It sure was nice to meet on campus, instead of uptown."

Chairman Lister called for any other business to come before the Committee. There being none, he declared the meeting adjourned at 2:40 p.m.

Respectfully submitted,

Thomas L. Stepp  
Secretary

## University of South Carolina

## BOARD OF TRUSTEES

Buildings and Grounds Committee  
 Friday, October 9, 2009, 10:00 a.m.  
 Capstone House Carolina Room

- I. New Administrative Organization
  
- II. Building a Capital Plan
  
- III. Long-range Financial Planning
  
- IV. Action Items
  - A. Project Status Update
  - B. Project Approval (Phase I)
    - 1. Construct Darla Moore School of Business
    - 2. Upfit Horizon I First Floor IDEA Lab
    - 3. Upfit Discovery I - ASPH
    - 4. Renovate Maxcy
    - 5. Renovate Harper/Elliott
    - 6. USC Aiken - Construct Pedestrian Bridge
    - 7. USC Upstate - Renovate/Add to Hodge Building
  - C. Project Approval (Phase II)
    - 1. Abate Jones PSC North
    - 2. Renovate and Replace DeSaussure Fire Protection
    - 3. Renovate Williams-Brice Stadium West Side Suites
  - D. Other Approvals
    - 1. Project Increase - USC Upstate Renovate Palmetto Villas - Part 2
    - 2. Small Projects
      - a. Replace Bates House Roof
      - b. Replace Blatt Physical Education Center Lighting
      - c. Replace Blatt Physical Education Center Pool Deck
      - d. Upgrade USC Aiken Electrical Distribution Upgrade
      - e. Energy Efficient Stimulus Funding Projects
        - i. Retrofit Lab Fume Hoods
        - ii. Install Lighting Controls and Sensors
        - iii. Install Central Chilled Water Air Separators at Plants
        - iv. Add Variable Speed Drive on Water Pumps at Plants
        - v. Upgrade Existing EMS Control and Install Meters
        - vi. Retrofit Parking Garages with LED
  - E. Other Business
    - 1. Fire Protection Initiatives
    - 2. Student Health Center Feasibility Study
    - 3. SCANA Property
    - 4. Biomass Plant
    - 5. Master Planning
    - 6. Innovista

SUBJECT: Construct Darla Moore School of Business

The University has determined that to provide for the growth and development of the Darla Moore School of Business, and to continue the excellence of its nationally recognized International Business and other undergraduate and graduate programs, a new facility should be constructed in the Innovista District. It is proposed that the new facility would consist of approximately 200,000 - 300,000 square feet featuring state-of-the-art classroom and meeting space, modern faculty and staff offices, and common areas needed to support the important mission of the Darla Moore School.

The anticipated budget for the project is \$90 million to be funded with debt serviced by NAC lease payments, University Funds, and Private Gifts. Approval is requested to fund only the initial design and development of a cost estimate for the project.

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COMMITTEE ACTION REQUESTED:

Approval is requested to establish this project for Phase I Design with a budget of \$1.35 million funded with Private Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: Upfit Horizon I First Floor IDEA Labs

This project is to upfit the first floor of the Horizon I Building. The upfit will provide space for the Innovista Wet-Lab Incubation Facility. It will include 20 labs in a total space of between 14,000 and 16,000 square feet.

The anticipated budget for the project is \$2 million and will be funded with EDA (Economic Development Administration) grant funding, University funds, and other funds. Approval is requested to fund only the initial design and development of a cost estimate for the project.

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COMMITTEE ACTION REQUESTED:

Approval is requested to establish this project for Phase I Design with a budget of \$30,000 funded with University Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue

SUBJECT: Upfit Discovery I - 40,000 square feet

This project is to upfit approximately 40,000 square feet of space in the Discovery I building. The completed space will be used to relocate the office functions of the Arnold School of Public Health that currently occupy the Health Sciences Building (located at the corner of Greene and Sumter Streets)

The anticipated budget for the project is \$10 million to be funded from Grant Generated Funds. Approval is requested to fund only the initial design and development of a cost estimate for the project.

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COMMITTEE ACTION REQUESTED:

Approval is requested to establish this project for Phase I Design with a budget of \$150,000 funded with Grant Generated Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: Maxcy Renovation

Maxcy College is located behind the historic Horseshoe and was constructed in 1937. It is a four story dormitory and contains approximately 45,000 gross square feet. The co-ed hall, with double room suites, houses approximately 180 South Carolina Honors College freshmen.

Renovations to Maxcy are for conversion to an International House Living Learning Center for students. The renovations include the kitchen, creation of a scholar-in-residence suite and creation of faculty offices.

Also, HVAC calls are one of the leading categories of student complaints. Air conditioning has been added to the facility, but the current system does not always address humidity control. This leads to the residents experiencing discomfort and contributes to mold growth. Advancements in technology allow for more environmental control and efficiency in operational cost.

This project is a request to move forward with investigating replacement of all fan coil units and installation of new air handlers and energy recovery units.

The anticipated budget for the project is \$3.75 million. Approval is requested to fund only the initial design and development of a cost estimate for the project.

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COMMITTEE ACTION REQUESTED:

Approval is requested to establish this project for Phase I Design with a budget of \$56,250.00 funded with Housing Maintenance Reserve Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: Renovate Harper/Elliott

Harper/Elliott College is located directly on the historic Horseshoe and was constructed in 1848. The co-ed dormitory, with two and four bedroom apartments, houses approximately 48 Upperclass Honors students.

A project to install a fire suppression system and enhance student safety was recently completed. The proposed project is to complete a comprehensive renovation that will address interior refurbishment (installation of new interior finishes including kitchen and toilet millwork and fixtures) as well as upgrades/replacement of plumbing, mechanical and electrical systems. Window replacement and exterior repairs will also be included in the project.

The project will address items required to maintain the facility while being mindful of aesthetic requirements to help USC retain its competitive advantage in recruiting new students. This renovation is intended to be the prototype for renovations to other housing facilities located on the Historic Horseshoe in future years.

The anticipated budget for the project is \$3.75 million. Approval is requested to fund only the initial design and development of a cost estimate for the project.

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COMMITTEE ACTION REQUESTED:

Approval is requested to establish this project for Phase I Design with a budget of \$56,250.00 funded with Housing Maintenance Reserve Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: USC Aiken Construct Pedestrian Bridge

At USC Aiken, the Roberto Hernandez Baseball Field and the Convocation Center are located on property west of the main campus. This creates potential safety issues for students attending athletic events, concerts, and community activities at these facilities. The Robert Bell Highway, which separates these facilities from the main campus, is a 55-mile per hour major throughway.

The campus has plans for an elevated walkway that would span the highway and provide safe passage between the two campus areas. It is anticipated that the crosswalk will need to be high enough to permit unrestricted traffic flow below it, as well as wide enough to permit planned expansion of the highway in years to come.

The anticipated budget for the project is projected to be as much as \$1 million. Approval is requested to fund only the initial design and development of a cost estimate for the project.

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COMMITTEE ACTION REQUESTED:

Approval is requested to establish this project for Phase I Design with a budget of \$15,000 funded with USCA Institutional Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: USC Upstate Renovate/Add to Hodge Building

The Hodge Center was constructed in 1973 and currently contains 81,640 gross square feet. A feasibility study that evaluated the options of constructing a new facility and the options to renovate and expand the current building has been completed. Based on the study, it was decided to expand and renovate the current facility.

The proposed project will renovate major portions of the building, expand the building by approximately 9,000 square feet, and correct several deferred maintenance items. The project will expand the gym and modernize athletic services areas, building entrances, and classrooms. The deferred maintenance work will principally address the HVAC and electrical systems.

The exact scope and budget will be determined during Phase I planning.

The anticipated budget for the project is projected to be between \$7-9 million. Approval is requested to fund only the initial design and development of a cost estimate for the project.

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COMMITTEE ACTION REQUESTED:

Approval is requested to establish this project for Phase I Design with a budget of \$130,000 funded with Private Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: Abate Jones PSC North

This project addresses the remediation of existing asbestos (above the ceiling) in approximately 70,000 square feet of the Jones Physical Sciences Building, including work in the north wing and the basement of both the north and south wing.

The scope of work will include removal of the existing suspended ceilings, light fixtures, fireproofing containing asbestos. After demolition is completed, new ceilings, light fixtures, and 2 hour protection on the structural steel will be installed. Existing floor and wall finishes will be repaired as necessary.

Work will be coordinated with the Registrar and College of Arts and Sciences to relocate building occupants as required during construction.

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COMMITTEE ACTION REQUESTED:

Approval is requested to fund Phase II Construction for \$5,450,000 for a total project budget of \$5.5 million to be funded with American Recovery and Reinvestment Act grant.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: DeSaussure Fire Protection Renovation

DeSaussure College, constructed in 1809, is the second oldest building on the campus of the University of South Carolina. Located in the historic Horseshoe District, the facility requires the installation of a fire protection system and general renovation. The building contains approximately 25,000 gross square feet (gsf). It is a mixed use facility combining student housing (15,000 gsf) with E&G (education and general) space (10,000 gsf). The central portion of the building is occupied by the College of Social Work.

The scope of work will consist of installation of a new fire protection system, fire alarm upgrades, emergency lighting, door and window upgrades, HVAC/electrical/plumbing upgrades, kitchen and toilet renovations, and interior finishes and trim.

These new improvements will enhance student living conditions as well as modernize the building to meet current life safety code requirements.

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COMMITTEE ACTION REQUESTED:

Approval is requested to fund Phase II Construction for \$4,477,000 for a total project budget of \$4,827,000 to be funded with \$3,909,870 from Housing Maintenance Reserve Funds and \$917,130 from ICPF (Institutional Capital Project Funds.)

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

Notes:

Phase I budget: \$350,000

Construction Estimate with alternates: \$4,827,000

Summer 2010: Fire Protection System

Summer 2011: HVAC, Mechanical and Electrical Repairs

Summer 2012: Windows, Kitchens and Bathrooms

SUBJECT: Renovate WBS West Side Suites

This project is to renovate eighteen Executive Suites and five Club Areas on the west side of Williams-Brice Stadium. Renovations will include new carpet, ceilings, lighting fixtures, plumbing fixtures, seating, wall coverings, casework, HVAC, furniture, stadium seats and handrails/stair treads.

In addition, this project is to renovate the club area on the 600 level of Williams-Brice Stadium. Work will include installation of new interior finishes (carpet, wall, ceiling) and modifications to the Television Press Broadcasting Area. The window façade will be modified to replace existing fixed glass with operable windows. It is planned to perform this work prior to the 2010 football season.

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COMMITTEE ACTION REQUESTED:

Approval is requested to fund Phase II Construction for \$3,058,000 for a total project budget of \$3.1 million to be funded with Athletic Operating Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: USC Upstate Renovate Palmetto Villas - Part 2

This project was initially approved in April 2007 as one component of the USC Upstate Housing Acquisition, Construction, and Renovation Project. The total project budget was \$36,050,000 with \$2 million allocated to renovations of Palmetto Villas. With the substantial completion of the project for the construction of the New Residence Hall, it has been determined that there will be funds remaining in the project. It is requested that some of these funds be used for additional renovations to the Palmetto Villas.

The renovations included in the original project scope have been completed. These include upgrades to restrooms and living areas including carpet replacement, wall and flooring repairs, painting, fixture and furniture replacement, improvements to smoke and fire detection systems, and improvements to the laundry and support services area.

The additional funding will be used to continue renovations and improvements to the 12 units in the existing housing facility. The planned work includes renovations to the exterior appearance of the buildings, roof replacement, creation of central service area for the Villas (mail, laundry, activity area, etc.), parking lot improvements including replacement of curb, gutter and paving, and construction of additional parking. As funding allows, mechanical systems in the units will also be replaced.

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COMMITTEE ACTION REQUESTED:

Approval is requested to increase the existing project budget by \$1.5 million funded with USC Upstate Housing Revenue Bonds. This will result in a total project budget of \$3.5 million funded with USC Upstate Housing Revenue Bonds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: Other Approvals - Small Projects

Bates House Roof Replacement

Bates House is located directly behind the Blatt P. E. Center on the south side of campus. It was constructed in 1969 and contains approximately 140,000 gross square feet. This nine story co-ed building houses more than 500 freshmen.

The flat roof on this building is at the end of its useful life cycle. The replacement roof is EPDM (Ethylene Propylene Diene Monomer), a synthetic rubber type roof. It has a short life cycle when compared with other roof types. It is proposed to replace this roof with a modified bitumen type that will continue to be leak free and prevent structural damage.

The budget for the project is \$495,000 and is to be funded with Housing Maintenance Reserve Funds.

Replace Blatt Physical Education Center Lighting

The Blatt Physical Education Center Natatorium, which opened in 1976, is experiencing significant issues due to the age of the facility. Potential safety and operational issues need to be addressed. A feasibility study has been conducted to identify specific issues, provide recommendations, and develop preliminary cost estimates.

The Blatt Natatorium serves many functions. It is the home facility for the University intercollegiate swimming and diving teams and hosts numerous community and regional swim meets. It also serves as the academic classroom for physical education and exercise science classes and is used by faculty, staff, students and alumni for exercise and recreational swimming. In addition, it provides numerous local organizations with a facility to host aquatic activities that do not exist elsewhere in our community.

The existing lighting system does not produce sufficient lighting levels, the maintenance is difficult, and the equipment is in poor condition. This project will replace the lighting in the pool area. The project will address ease of maintenance, lighting finishes that are rated for natatorium settings and resist corrosion, and improvement of lamp life.

The budget for the project is \$495,000 and is to be funded with Student Services Operating Funds.

Replace Blatt Physical Education Center Pool Deck

The Blatt Physical Education Center Natatorium, which opened in 1976, is experiencing significant issues due to the age of the facility. Potential safety and operational issues need to be addressed. A feasibility study has been conducted to identify specific issues, provide recommendations, and develop preliminary cost estimates.

The Blatt Natatorium serves many functions. It is the home facility for the University intercollegiate swimming and diving teams and hosts numerous community and regional swim meets. It also serves as the academic classroom for physical education and exercise science classes and is used by faculty, staff, students and alumni for exercise and recreational swimming. In addition, it provides numerous local organizations with a facility to host aquatic activities that do not exist elsewhere in our community.

The existing pool deck consists of ceramic tile floor sloped to evenly spaced floor drains. The existing floor slope and drains are not shedding all water and leave standing puddles which result in a consistently damp, slick surface posing safety issues for swimmers and spectators. The proposed solution will replace the tile with slip resistant tile and increase the slope of the deck to a central trench drain.

The budget for the project is \$495,000 and is to be funded with Athletic Funds.

Upgrade USC Aiken Electrical Distribution

This project will upgrade components of the electrical distribution system on the USC Aiken Campus. Existing high voltage underground switch gear and bus ducts are extremely difficult to service due to confined space conditions, water infiltration, and lack of accessibility. Local utilities refuse to consider a service contract on this equipment due to equipment age and inherent safety concerns.

To ensure long-term reliability of electrical distribution systems, this equipment is to be replaced with above ground stations that can be properly maintained by a qualified electrical services provider.

The budget for the project is \$400,000 funded with Federal Stimulus (American Recovery and Reinvestment Act) Funding. Interim funding for the initial planning for the project will be funded with \$15,000 from USCA Institutional Funds.

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COMMITTEE ACTION REQUESTED:

Approval is requested for these four small projects with the budgets and funding sources listed:

Replace Bates House Roof.....	\$495,000
	Housing Maintenance Reserve Funds
Replace Blatt Physical Education Center Lighting.....	\$495,000
	Student Services Operating Funds
Replace Blatt Physical Education Center Pool Deck.....	\$495,000
	Athletic Funds
Upgrade USC Aiken Electrical Distribution.....	\$400,000
	American Recovery and Reinvestment Act Funding

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.

SUBJECT: Energy Efficient Stimulus Funding Projects

The South Carolina Energy Office (SCEO) has received \$45.7 million in stimulus funds for state agencies, school districts, public colleges and universities. Of this total, \$12.2 million is designated for the state's two- and four-year colleges.

SCEO has allocated these funds based on energy consumed by agency facilities in FY 2006. Seventy five percent of each agency's allocation will be issued as a grant, and twenty five percent will be a loan to be paid back from energy savings. Agencies must submit applications for their allocations by September 1, 2009. All awards must be expended by December 2010.

USC Columbia is allocated \$2.8 million, of which \$2.1 million is a grant and \$700,000, a loan.

These stimulus funds must support planning and implementing energy efficiency and renewable energy projects. Specifically, requests must be either:

1. An energy efficient device, technique or technology designed to reduce energy consumption, peak demand, and/or utility costs at an existing building or facility;
2. A device, technique or technology designed to use energy from renewable sources (such as solar, wind, biomass, hydropower) in place of energy from fossil fuels, or
3. Alternative fuel or advanced technology vehicles and alternative fuel infrastructure.

Overall, projects must have a payback period of eight years or less or a simple Return on Investment of 2.5 or greater. Exceptions can be reviewed for a possible waiver of these standards. An agency's application must be consistent with its Energy Conservation Plan.

USC Columbia facilities and finance staff analyzed various prospective energy efficient and renewable energy projects to determine implementation cost, projected annual cost savings, projected reduction in energy consumption and time required to complete each project. The following criteria were used in selecting recommended projects:

- The first criteria addressed was that a project had to meet the requirement of a payback period of 8 years or less or an overall return on investment of 2.5 or greater.
- Because projects must be completed by December 2010, we also focused on projects that could be priced below \$500,000 since these will not be subject to approval processes outside of the University's system.
- In addition, we also selected projects that have the greatest energy savings and thus the highest payback as well as projects that have a high visibility.

The following is a list of recommended projects to be included in the USC Columbia energy stimulus funds request application. This recommended list consists of a good mix of projects that are primarily energy cost related.

#### Retrofit Lab Fume Hoods

This project will upgrade twenty three (28) lab fume hoods to reduce energy consumption. Most fume hoods on campus operate 24/7 and many have constant air flow and excessive air loss when not in use due to the hood sash being left in the open position. This project will install new automated hood sashes that will close when the hood is not in use. The hood has sensors to detect if something is under the sash and will not allow it to close until the opening is clear. Energy is saved by reducing air loss and thus, lowering the heating and cooling requirements for the space. The following areas were chosen for this project phase based on their older type hoods and constant volume HVAC systems. - Swearingen Annex (20 units), Sumwalt Eng. (5 units) and Blatt PE Center (3 units).

Project Cost: \$300,000 Est. Energy Savings: \$82,894 Est.  
Payback: 3.6 Years

#### Install Lighting Controls and Sensors

Install automated lighting control panels and occupancy sensors in five USC campus facilities (Darla Moore School of Business, Nursing, School Of Music, Gambrell Hall, 1600 Hampton Street and the Blatt PE Center). Facilities were selected based on their large size, occupancy schedule, ease of project installation and noted locations where lights are being left on at night. Large classrooms and auditoriums will have occupancy sensors to turn lights off when not in use and the remaining building areas will be connected to automated lighting control panels (i.e. a digital time clocks) and scheduled off based on building occupancy schedules. System override switches will be conveniently located on each floor to allow building occupants to turn lights on after normal working hours when necessary.

Project Cost: \$490,000 Est. Energy Savings: \$89,593 Est. Payback:  
5.5 Years

#### Install Central Chilled Water Air Separators at Plants

Install automatic air separators on the central chilled water distribution system in each of the three central energy plants. Air is a very good insulator and is used in double pane, energy efficient glass windows to prevent the transfer of heat. However, in a chilled water system, which has about 10% air, we are trying to transfer heat from the water to the cooling equipment (chillers) in the plant. Removing the air from the water makes the cooling process much more efficient and saves energy. It also allows the

chilled water to extract heat from the campus building's air handlers more efficiently, thus saving energy in each facility that uses chilled water.  
Project Cost: \$350,000 Est. Energy Savings: \$50,000 Est. Payback: 7 Years

Add Variable Speed Drive on Water Pumps at Plants

Install electric variable speed drive units on eighth (8) condenser water pumps located in the four central energy plants. These variable speed drives will be installed on the pumps that work with the plant's chilled water system. Currently these pumps operate at 100% speed whenever they operate. The pump motors are large and range from 150 horsepower to 300 horsepower each. The speed drive units will reduce the pump's speed to correspond to the actual cooling load as it varies throughout the day, thus saving energy.  
Project Cost: \$336,887 Est. Energy Savings: \$48,127 Est. Payback: 7 Years

Upgrade Existing EMS Control and Install Meters

Install steam, chilled water and electric sub-meters in twelve (12) large USC Housing dormitory facilities to provide accurate billing of utilities. Facilities to be metered are (West Quad, East Quad, South Quad, Bates House, Cliff Apartments, Capstone, Columbia Hall, South Tower, Maxcy, Sims, McClintock and Wade Hampton). The meters will be digital and connected to the campus existing central energy management system (EMS) for remote monitoring and recording. Current utilities for steam and chilled water are estimated based on the "average campus use" and not the actual consumption; which is estimated to be higher. Money will be saved by working with Housing to reduce their cost once consumption can be accurately monitored and tracked on a real time basis. Real time information on consumption can be used to alter student behavior and to improve system maintenance and operating efficiency.  
Project Cost: \$300,000 Est. Energy Savings: \$42,857 Est. Payback: 7 Years

Retrofit Parking Garages with LED

Retrofit the lighting in the 1600 Hampton Street, Bull Street and the Darla Moore School of Business parking garages. The existing high wattage, high pressure sodium lighting will be replaced with new low wattage, energy efficient, LED (Light Emitting Diode) light units. These units use much less energy, have a whiter light and last 4 times as long.  
Project Cost: \$495,000 Est. Energy Savings: \$62,771 Est. Payback: 7.9 Years

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COMMITTEE ACTION REQUESTED:

Approval is requested for the six energy efficient stimulus funding projects with the budgets listed:

Retrofit Lab Fume Hoods.....	\$300,000
Install Lighting Controls and Sensors.....	\$490,000
Install Central Chilled Water Air Separators at Plants	\$350,000
Add Variable Speed Drive on Water Pumps at Plants...	\$336,887
Upgrade Existing EMS Control and Install Meters.....	\$300,000
Retrofit Parking Garages with LED.....	\$495,000

All projects are to be funded with American Recovery and Reinvestment Act Grant and Loan Funds.

The University hereby declares its official intent, pursuant to Federal Regulations, to reimburse itself from the amount of proceeds of the tax-exempt bond issue.