April 16, 2013

The Honorable Hugh K. Leatherman, Sr., Chairman  
Joint Bond Review Committee  
111 Gressette Senate Office Building  
Columbia, SC 29201

Dear Senator Leatherman:

The State Budget Division submits the following items for review at the April 24, 2013 meeting of the Joint Bond Review Committee:

For the State Budget Division:

1) Clemson University Research University Infrastructure Project.

2) Summary 6-2013, including 12 permanent improvement project requests.

If you have any questions or need additional information on these items, please do not hesitate to contact me at 803-737-0699 or crouth@budget.sc.gov.

Sincerely,

Carol P. Routh  
Manager, Capital Budgeting

Enclosures

cc: Dianne Carraway, Tim Rogers, Ted Pitts, Bill Leidinger, Bill Condon, Rick Harmon, Jim Holly, John White, Patricia Dennis, Courtney Blake, Les Boles, Charles Shawver, Stephen Gardner, Monica Scott, Derek Gruner, Bill McCalhun, Gary Grant, Jim Berry, John McEntire, Scott Speares
Meeting Scheduled for: April 24, 2013

1. Submitted By:
   (a) Agency: State Budget Division
   (b) Authorized Official Signature: Carol P. Routh, Manager

2. Subject: Clemson University Research University Infrastructure Project

3. Summary Background Information:

   On March 22, 2013, the SmartState Review Board certified Clemson University for $5 million in general obligation debt to be issued under the South Carolina Research University Infrastructure Act (RUIA) for the Clemson University/Greenwood Genetics Center Research Collaborative project. The Act requires the Review Board to certify that at least 50% of the cost of each research infrastructure project is being provided by private, federal, municipal, county or other local government sources.

   The Clemson Research University Infrastructure Project consists of the following components that were certified by the Review Board for funding or as part of the required match:

   1) construction of a 17,000 square foot Genetics and Research Education Center for $6.5 million, of which $5 million will be funded with general obligation Research University Infrastructure Bonds and $1.5 million will be funded with gift funds received from Greenwood County, which provides a portion of the required match;

   2) a gift of 14.79 acres of land to Clemson from Greenwood County and the Greenwood Commissioners of Public Works, valued at $1,140,000, on which the Genetics and Research Education Center will be constructed, which provides a portion of the required match. Greenwood County will donate 10.79 acres and the Commissioners of Public Works will donate 4.0 acres;

   3) an in-kind lease of 3,331 square feet at 117 Gregor Mendel Circle in Greenwood, leased by the Greenwood Genetics Center to Clemson for $1 per year for three years, valued at $299,787 which provides a portion of the required match;

   4) an in-kind lease of 30,301 square feet at 117 and 106 Gregor Mendel Circle in Greenwood, leased by the Greenwood Genetics Center to Clemson for $1 per year for 15 years, valued at $13,635,435 which provides a portion of the required match.

   The total cost of the Clemson Research University Infrastructure Project is approximately $21,575,240. The facility to be constructed will be dedicated to human and agricultural genetic and epigenetic research and will contain eight labs and offices to accommodate more than 40 researchers, technicians, and doctoral students. The facility will provide cornerstone research space for Clemson’s Genetics doctoral program and opportunities for research collaboration with investigators at the J.C. Self Research Institute of Human Genetics (Greenwood Genetics Center).

   The SmartState Board has certified to the Joint Bond Review Committee and Budget and Control Board the following in accordance with Code Sections 11-51-70 and 11-51-80:

   1) The total cost of the Research Infrastructure project is approximately $21,575,240.

   2) The completed schedule (projected construction period) during which the proceeds of the requested general obligation will be executed is as follows: June 2013 to January 2016.

   3) The Clemson University RUIA project, for which $5,000,000 in general obligation debt is requested to be issued, is described in the February 1, 2013 letter and project summary from Clemson University.
The Clemson RUIA project was presented and approved by the SmartState Review Board on March 22, 2013.

4) Pursuant to Code Section 11-51-70, at least 50 percent of the cost of the Clemson University RUIA Project is matched by private, federal, municipal, county or other local government sources. This match, totaling $16,575,222, conforms to the SC Research University Infrastructure Act Cost Share Accounting Policy.

5) Therefore, the provisions of Code Section 11-51-70 have been met, the source and validity of the match have been verified, and the Clemson University Project, as described in the Clemson University Proposal, complies with the provisions of Title 11, Chapter 51 of the SC Code, subject to confirmation of financing to be provided to the State Treasurer’s Office.

6) The SmartState Board has determined that the Clemson RUIA Project conforms to the purposes and goals of the South Carolina Research University Infrastructure Act. The Board has approved the Clemson RUIA Project in accordance with the Act and the Board’s implementation guidelines.

The Joint Bond Review Committee is asked to approve the Clemson University/Greenwood Genetics Center Research Collaborative RUIA project. Associated with the RUIA project, JBRC is also asked to approve the establishment of a permanent improvement project request for construction of the Clemson University/Greenwood Genetic Center Building for $6.5 million, funded with $5 million in Other, Research University Infrastructure Bonds and $1.5 million in Other, Gift funds from Greenwood County, and approve the acquisition by Clemson of 14.79 acres of land donated from Greenwood County and the Greenwood Commissioners of Public Works.

4. What is the JBRC asked to do?

Approve the Clemson University/Greenwood Genetics Center Research Collaborative RUIA project, approve the establishment of a permanent improvement project for $6.5 million, including $5 million in Research University Infrastructure Bonds and $1.5 million from Greenwood County, for construction of the Clemson University/Greenwood Genetic Center Building, and approve the acquisition by Clemson of 14.79 acres of land donated from Greenwood County and the Greenwood Commissioners of Public Works.

5. What is the recommendation of the State Budget Division?

Approve the Clemson University/Greenwood Genetics Center Research Collaborative RUIA project, approve the establishment of a permanent improvement project for $6.5 million, including $5 million in Research University Infrastructure Bonds and $1.5 million from Greenwood County, for construction of the Clemson University/Greenwood Genetic Center Building, and approve the acquisition by Clemson of 14.79 acres of land donated from Greenwood County and the Greenwood Commissioners of Public Works.

6. List of Supporting Documents:

1. Letter from Regan Voit, Chairman, SmartState Review Board
2. Certification and Statement of the SmartState Review Board
3. Letter from Doris Helms, Provost, Clemson University
4. Clemson Matching Funds Request and Project Summary
5. RUIA Match Summary Sheet
6. Debt Service and Related Schedules
March 22, 2013

RE: Certification of Research University Infrastructure Act (RUIA) Project for Clemson University: Greenwood Genetics Center Research Collaboration

Dear Senator Leatherman:

On behalf of the SmartState Review Board (Review Board), I am pleased to transmit to you certification of $5,000,000 in general obligation debt to be issued under the South Carolina Research University Infrastructure Act for the Clemson University/Greenwood Genetics Center Research Collaboration project.

The Act requires that the Review Board “certify to the state board that at least fifty percent of the cost of each research infrastructure project is being provided by private, federal, municipal, county, or other local government sources.” The Act further stipulates that “[t]his portion of the cost, in the discretion of the [Board], may be in the form of cash; cash equivalent; buildings including sale-lease back; gifts in kind including, but not limited to, land, roads, water, and sewer, and maintenance of infrastructure; facilities and administration costs; equipment; or furnishings.”

Clemson University submitted supporting information to Commission on Higher Education staff on February 1, 2013, and presented this information to the Review Board on March 22, 2013. With the stipulation that all of the universities use the services and talents of South Carolinians to the maximum extent possible in conducting such infrastructure projects, the Review Board voted to certify the request from Clemson University on March 22, 2013.

Please find enclosed a Certification that summarizes the information required from the Review Board pursuant to the South Carolina Research University Infrastructure Act. This information has also been presented to the Budget and Control Board (State Board). If the Joint Bond Review Committee or the State Board requires additional supporting information, the Review Board welcomes the opportunity to provide additional information supporting this certification.
The Review Board believes that this project represents an exciting opportunity for Clemson University and the State. Please do not hesitate to contact me or South Carolina Commission on Higher Education staff (Mr. Arik Bjorn / 803.737.2293 abjorn@che.sc.gov) should you have any questions or require any additional information about this matter.

Sincerely,

Regan Voit
Chair, SmartState Review Board

cc: Ms. Carol Routh, S.C. Budget & Control Board
    Ms. Dianne Carraway, Joint Bond Review Committee
    Mr. Rick Harmon, State Treasurer’s Office

Enclosure: Clemson University/Greenwood Genetics Center Research Collaboration Certification
CERTIFICATION AND STATEMENT
OF THE SMARTSTATE REVIEW BOARD

This Certification and Statement is made by the SmartState Review Board to the South Carolina Joint Bond Review Committee and the South Carolina State Budget & Control Board in accordance with Sections 11-51-70 and 11-51-80 of the Code of Laws of South Carolina (1976), as amended (the “Code”). This Certification and Statement concerns the proposed Research University Infrastructure Act (RUIA) Project, as defined in S.C. Code Section 11-51-30(4), to be developed on the Clemson University campus in Greenwood County, South Carolina.

The RUIA Project consists of the following original building components:

- 17,000 square footage Genetics Research and Education Center, located on 14.79 acres of land (gifts to Clemson University by Greenwood County and Greenwood Commissioners of Public Works) located within the Greenwood Research Park in Greenwood County, South Carolina. The facility will be dedicated to human and agricultural genetic and epigenetic research and will contain eight laboratories and offices to accommodate more than 40 researchers, technicians, and doctoral students, including one Clemson program chair and a proposed SmartState Endowed Chair in the field of genetics. This facility will provide cornerstone research space for Clemson University’s Genetics doctoral program, and will greatly assist in the recruitment to South Carolina of research and development companies engaged in human diagnostics; central nervous system research in cognitive development, autism, birth defects; and epigenetics. The facility will also provide opportunities for research collaboration with investigators at the J.C. Self Research Institute of Human Genetics (Greenwood Genetics Center). Cost: $6,500,000. [See Exhibits A, B-1, B-2, C-1, C-2, D & E.]

TOTAL COMPONENT COST: $6,500,000

The SmartState Review Board hereby certifies and states to the Joint Bond Review Committee and the Budget and Control Board the following:

(1) The total cost of the Research Infrastructure Project is approximately $21,575,240.

(2) The completed schedule (projected construction period) during which the proceeds of the requested general obligation will be executed is as follows:

June 2013 to January 2016

(3) The Clemson University RUIA Project, for which $5,000,000 in general obligation debt is requested to be issued, is described in the February 1, 2013, letter and project summary [Exhibit A] from Clemson University. The Clemson University RUIA Project was presented and approved by the SmartState Review Board on March 22, 2013.
(4) Pursuant to S.C. 11-51-70, at least 50 percent of the cost of the Clemson University RUIA Project is matched by private, federal, municipal, county or other local government sources. This match, totaling $16,575,222, conforms to the S.C. Research University Infrastructure Act Cost Share Accounting Policy. [See Exhibit H for match details.]

(5) Therefore, the provisions of S.C. 11-51-70 of the Code have been met, the source and validity of the match have been verified, and the Clemson University Project, as described in the Clemson University Proposal, complies with the provisions of Title 11, Chapter 51 of the Code, subject to confirmation of financing to be provided to the State Treasurer’s Office.

(6) The Board has determined that the Clemson RUIA Project conforms to the purposes and goals of the South Carolina Research University Infrastructure Act. The Board has approved the Clemson RUIA Project in accordance with the Act and the Board’s implementation guidelines.

This Certificate and Statement is made this 22nd day of March, 2013, by the Board:

Regan Voit
Chair, SmartState Review Board
Mr. Arik Bjorn  
SC Commission on Higher Education  
1122 Lady Street, Suite 300  
Columbia, South Carolina 29201  

RE: South Carolina Smart State Program  

Dear Mr. Bjorn:  

On behalf of Clemson University’s President James F. Barker, who is currently on medical leave, Clemson University is requesting certification and URISA Funding for $5 million for the Human Genetic Research and Education Building located on the Greenwood Genetic Center campus in Greenwood, South Carolina. This center advances human genetic discovery and clinical research. Matching funding requirements have been met as requested.  

Attached is a summary of the project, documentation of matching funding and the required A-1 Form.  

We express our thanks to you and your staff for your assistance.  

Sincerely,  

Doris R. Helms  
Provost  

DRH/jk  
Enclosures
Matching Funds Request

Clemson University Building for Human Genetic Discovery and Translational Research
Greenwood, South Carolina

Clemson University – Greenwood Genetic Center
Research Collaborative

February 2013
Project Summary

Clemson University, in conjunction with the Greenwood Genetic Center, propose to build a new 17,000 square foot research and education center in human genetics with bond allocation reserves remaining from the South Carolina University Infrastructure Act. This project represents the physical building to expand the existing doctoral program in human genetics and to add a nationally/internationally competitive research and development team. The project will expand the existing research capabilities of the J.C. Self Research Institute of Human Genetics and represents a core campus for recruitment of research and development companies engaged in human diagnostics, central nervous system research in cognitive development, autism, birth defects and epigenetics.

The project presented represents a coordinated program with three primary elements representing education, research and economic development. The building is a cornerstone of county recruitment strategy with direct economic benefits to Greenwood County and South Carolina. The Greenwood Economic Alliance Partnership has a dedicated recruitment plan to attract private research and development companies to a 162 acres adjacent research park to partner with Clemson University and the Greenwood Genetic Center. An additional 300 acres is available to expand the park.

The Clemson University Office of Economic Development will directly participate in the recruitment using programs proven successful in the development of International Center for Automotive Research (CU-ICAR) in Greenville, SC and the Restoration Institute (CURI) in Charleston, SC. CU-ICAR and CURI represent two leading Clemson University economic development centers generating a combined $400 million plus in new private and public capital investment.

The Greenwood Genetic Center (GGC) is a private not-for-profit organization. The GGC currently conducts basic and clinical research supported by federal grants and private donations. The GGC receives partial funding from the State of South Carolina for delivery of services, diagnosis, testing and treatment for diseases and syndromes related to intellectual disabilities, birth defects, and related disabilities.

This is a request for $5 million in funding for the construction of a new research and teaching facility on the Greenwood Genetic Center campus to reside on land gifted to Clemson University. This proposal provides a match based on existing cash contributions, leased research facilities from the Greenwood Genetic Center and land donated by Greenwood County. The Greenwood County has committed to provide the land for the proposed new research and teaching facility. The new building and land is owned by Clemson University and will be located on the GGC campus and supported by the existing campus infrastructure including roads and utilities.

This research collaborative is unlike any proposed in South Carolina. The Greenwood Genetic Center is opening the research campus to the Clemson University investigators. These research teams will share existing and proposed new space in the pursuit of
diagnostics and therapeutics that have the potential to provide immediate diagnosis of a variety of disease syndromes including intellectual disabilities, birth defects, and related human disabilities. In addition, the Greenwood Genetic Center and Clemson University are evaluating research pathways to create novel new diagnostics that may be used to predict the efficacy of therapeutics for new targeted disease states and provide early diagnostic tests identifying the potential for chronic disorders which may include diabetes, cancer and cardiovascular disease noted for high prevalence in South Carolina.

**This center will create a world-class research center for personalized medicine providing genetic-based diagnostics and therapeutics.** In recent years discoveries at the GGC target new pathways and therapeutics that have the potential of treating intellectual disabilities. This collaboration offers access to world-class genetic equipment and expertise that can create new intellectual property across a broad range of potential new products.

**Economic Impact Summary**

The Center for Human Genetic Discovery and Translational Research represents a nationally and internationally competitive research and development center created through a research collaboration of Clemson University and the Greenwood Genetic Center. Clemson University has an established private corporate collaborative research model to build and sustain private, soft-money, research centers in key nationally recognized growth markets. This center will address market opportunities in diagnostics and epigenetic therapeutics. New market demand in diagnostics is emerging from a market and regulatory demand for companion diagnostics and therapeutics designed to predict patient efficacy and decrease dangerous side effects. Further, whole genome sequencing and computational biology is creating new approaches for defining complex biological pathways and gene expression supporting new diagnostics and therapeutics. Diagnostics may include intellectual disabilities, autism, cancer, diabetes, developmental syndromes, heart disease, neurological and immunologic disorders.

Complementing research emerging from Clemson University and the Greenwood Genetic Center are identifying common nutrients that successfully alter epigenetic modifications. Understanding the genetic implications of diet, nutrients and the delivery of common vitamins has promise in creating new therapeutics and foods supporting improved health in many chronic diseases that plague South Carolinians including diabetes, heart disease, neurological development and birth defects.

Likely outcomes that impact the economy of South Carolina include increased research, development and manufacturing outcomes that have the potential to create over 1,000 new direct and indirect jobs in research, manufacturing and agriculture. Preventative nutritional therapies have the potential to impact new crop development in South Carolina and engage food companies in new packaging opportunities. Diagnostic research and development activities, focused on companion diagnostic and therapeutics, can directly link the genetic research capabilities of this collaborative with major national and international pharmaceutical companies. This collaborative is projected to include 15 to 20 major US and international corporations in research and development activities. **Currently six pharmaceutical, diagnostic and medical companies are**
currently engaged with the Greenwood Genetic Center in primary and applied clinical research for diagnostics and therapeutics.

Clemson University has a dedicated commercialization support program which will assist in licensing and development of research generated from the collaborative. This will include programs to assist faculty, students and interested entrepreneurs advancing South Carolina-based companies. This is a key economic development program designed to create new research, development and manufacturing jobs.

Private companies participating in the collaborative are encouraged to co-locate on an adjacent 165 acres using a model similar in design to the Clemson University Automotive Research (CU-ICAR) Center located in Greenville, SC. Additional location opportunities for companies may include Charleston or Clemson, based on specific company research, development or manufacturing requirements.

The Center is projected to create a total payroll of over $50 million annually with a projected capital investment exceeding $80 million across South Carolina. This center advances "knowledge-based industries" creating a nationally competitive team for new diagnostic development and genetic therapeutics.

Projected 10 year Fiscal Impact Analysis for Proposed Center Development

The Center is anticipated to generate a minimum of $1.5 mm annually in grant revenue supported by five dedicated Clemson University new senior research positions, which may include one or more endowed chairs. The center will function as a collaborative soft-money institute blending federal and private corporate research and development funding with an annual research goal of

1 Clemson University internal model using projections similar to other economic development centers developed in Greenville and Charleston, SC including CU-ICAR and the Wind Turbine Testing Facility.
not-less-than $3 million annually. The collaborative, within five years, is projected to generate $10 million annually from federal and private genetic research from the lead research institutions.

Corporate partners invited to participate will span the field of human genetics including diagnostics, pharmaceuticals, biopharmaceuticals, genome sequencing, micro-array, hospital systems, food, nutraceuticals, and computational bioinformatic modeling. These partners will participate in three primary targets including development of diagnostics for human disabilities, companion diagnostics for developing therapeutics, and development of epigenetic and genetic therapies designed to mitigate methylation and histone modifications.
Research University Infrastructure Act

Clemson University
Human Genetic Discovery & Translational Research
(Research Collaboration with Greenwood Genetics Center)

Match Summary Sheet

I. Project Components:

1. Research & Education Center ............................................................ $6,500,000
2. 14.79 Acres (Land Gift) .................................................................... $1,140,000
3. 117 Gregor Mendel Circle In-Kind Lease (3,331 sq. ft.) ...................... $299,790
4. 117 & 106 Gregor Mendel Circle In-Kind Lease (30,301 sq. ft.) ... $13,635,450

TOTAL PROJECT COST ............................................................................ $21,575,240

Pursuant to S.C. 11-51-70, at least 50 percent of the cost of each Research Infrastructure Project must be matched by private, federal, municipal, county, or other local government sources. Based on the total project cost of $21,575,240 million, the match for the Innovation Center project must be at least $10.8 million.

II. Cost Matching Components:

1. Cash Gift toward Construction of Research & Education Center .... $1,500,000
   [See Exhibit B-1 & C. Source: Greenwood County.]
2. Land Gift of 14.79 Acres ................................................................... $1,140,000
   [See Exhibits B-2, C & D. Source: Greenwood County, Greenwood Commission of Public Works.]
3. 117 & 106 Gregor Mendel Circle In-Kind Lease ......................... $13,635,435¹
   [See Exhibits G-1 & G-2. Source: Greenwood Genetics Center.]
4. 117 Gregor Mendel Circle In-Kind Lease ............................................ $299,787²
   [See Exhibits F-1 & F-2. Source: Greenwood Genetics Center.]

TOTAL MATCH ............................................................................................ $16,575,222

For the Innovation Center project, Clemson University has obtained $5.8 million in overmatch of non-state funds (as permitted by the Research University Infrastructure Act Cost Share Accounting Policy, Item III), which at a future date may be applied to unanticipated additional project costs.

¹ The $15 cost of the lease has been deducted from the match value.
² The $3 cost of the lease has been deducted from the match value.
Tentative Time Schedule Setting Forth the Period of Time
During Which the Proceeds of the General Obligation Debt
Requested to be Issued Will be Expended

Section 11-51-80(4) Code of Laws of South Carolina 1976, as amended

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Debt Service Schedule Showing the Annual Principal and Interest Requirements
At a Projected Current Rate of Interest on the Requested General Obligation Debt

Section 11-51-80(5) Code of Laws of South Carolina 1976, as amended

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Total Amount of the General Obligation Debt
Issued Pursuant to Title 11, Chapter 51 Code of Laws of South Carolina 1976, as amended

Section 11-51-80(6) Code of Laws of South Carolina 1976, as amended

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Total $158,725,000.00 $33,160,018.75 $191,885,018.75
Debt Service Schedule Showing Annual Principal and Interest Requirements
For the General Obligation Debt Outstanding and the Proposed General Obligation Debt
At a Projected Current Rate of Interest

Section 11-51-80(7) Code of Laws of South Carolina 1976, as amended

<table>
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<th>Fiscal Year Ending</th>
<th>Principal</th>
<th>Interest</th>
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<td><strong>$197,426,437.83</strong></td>
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Item 1.  Agency: H15  College of Charleston  
Project: 9652, Addlestone Library Adaptation

Action Proposed: Establish Project for A&E Design

Total budget: $75,000.00  
[9] Other, Capital Improvement Project Funds: $75,000.00

Purpose: To begin design work to make adaptations to the interior of the Addlestone Library at the College of Charleston. The eight-year old library was designed with the flexibility to use compact shelving in order to make adaptations to the floor space as space needs change. The work will include installing 35,000 linear feet of compact shelving for the general book collection, adding 168 general purpose seats, three new group study rooms and a new 50-seat modular lecture/classroom, and expanding seating in the Special Collections reading room. These adaptations are needed to increase space for rare books and manuscripts provided by the SC Historical Society, to provide students and faculty with space to more effectively collaborate on digital projects, and to meet library seating needs, which currently can only accommodate 13% of the student body at one time.

Ref:  Supporting document pages 1-6

Item 2.  Agency: H27  University of South Carolina  
Project: 6102, Athletic Village Tennis Complex Addition

Action Proposed: Establish Project for A&E Design

Total budget: $15,000.00  
[8] Athletic Operating: $15,000.00

Purpose: To begin design work to construct an addition to the Tennis Complex at the University of South Carolina. The 3,570 square foot addition will be constructed in areas below the existing raised viewing concourse of the tennis facility and will include men’s and women’s team meeting, film and locker rooms, a visitor meeting room and a restroom facility. Currently, the tennis teams share locker facilities in the Roost E building which has no meeting and film rooms. Teams are not allowed to leave the competition facility once a match has started and thus have no opportunity to return to a separate facility to meet between matches. Private team meeting areas and restrooms are crucial during match play so conversations are not overheard and competing players do not interact while using restroom facilities during breaks.

Ref:  Supporting document pages 7-12
Item 3.  Agency: F03  Budget and Control Board  Project: 9919, Senate Street Building Roof Replacement

Action Proposed: Establish Project for A&E Design

Total budget $9,574.50

Purpose: To begin design work to replace the roof on the Senate Street Building that houses programs of the Budget and Control Board and the University of South Carolina. The work will include removing the existing concrete deck, installing a new vapor barrier, replacing the aluminum built up roof with a modified asphalt two-ply roof, and tuck pointing the joints between the limestone veneer wall panels that surround the building’s high roof areas. The existing roof is leaking and retaining moisture. If the roof and insulation are not replaced, moisture will penetrate the building envelope, damaging building systems and creating the potential for environmental hazards such as mold.

Ref: Supporting document pages 13-18

Item 4.  Agency: H27  University of South Carolina  Project: 6096, Outdoor Football Practice Fields Construction

Action Proposed: Establish Construction Budget for $3,000,000.00

(Add $2,955,000.00  [8] Athletic Operating)

Purpose: To develop two outdoor football practice fields for the University of South Carolina. The project was established in June 2012 for pre-design work which is now complete. The work on the former Farmer’s Market site will include grading, installing drainage, turf, irrigation, lighting and goal posts, and constructing two film towers. Existing practice fields are located on leased property. The university has decided to develop permanent facilities on property owned by the university instead of investing in improvements to leased facilities. Energy savings and conservation measures will include the installation of energy efficient lighting. The agency reports the total projected cost of this project is $3 million and annual operating cost savings of $130,000 will result in the year following project completion. The agency also reports the projected date for execution of the construction contract is November 2013 and for completion of construction is June 2014.

Ref: Supporting document pages 19-24
Item 5.  Agency: E24   Adjutant General  Project: 9773, Multiple Armory Maintenance Repairs

Action
Proposed: Establish Construction Budget for $1,000,000.00

(Add $500,000.00 [7] Federal)

Purpose: To repair and maintain readiness centers statewide for the Adjutant General’s Office. The project was established in March 2013 with legislatively authorized funds appropriated specifically for armory maintenance to provide match for federal funds available to the agency for repairs to readiness centers on state land. This request is to commit the federal funds for which matching funds were appropriated. No external pre-design work will be required for the repairs. The work will include replacing roofs, doors, windows and lighting, renovating restrooms, improving parking, replacing an HVAC system, and painting. The facilities to be repaired were constructed between 1950 and 1970, with one constructed in 1933, and all have maintenance needs. Energy savings and conservation measures will include the installation of energy efficient roof, lighting, HVAC and window systems. The agency reports the total projected cost of this project is $1 million and no additional annual operating costs will result from the project. The agency also reports the projected date for execution of the first construction contract is June 2013 and for completion of all construction is November 2013.

Ref: Support document pages 25-33

Item 6.  Agency: F03   Budget and Control Board  Project: 9852, Gressette Building Air Handler Fan Replacement

Action
Proposed: Establish Construction Budget for $699,631.00

(Add $351,288.83 [9] Other, Depreciation Reserve)
(Add $325,842.17 [9] Other, Deferred Maintenance)

Purpose: To replace the air handler fans in the Gressette Building. The project was established in January 2008 for pre-design work, put on hold while addressing Gressette Building reinforcement work, and pre-design work is now complete. The work will include replacing the existing air handler fans with new fans, motors and cooling coils and doing associated electrical work. The air handling unit is 36 years old and original to the building. Parts have rusted and corroded and motor problems are occurring that could lead to no air conditioning if the motor were to break completely. The fans are outdated, inefficient, and difficult to repair and parts have become obsolete. Energy savings and conservation measures will include the installation of energy efficient fans with variable speed drives. The agency reports the total projected cost of this project is $699,631 and annual operating cost savings of $32,670 will result in the three years following project completion. The agency also reports the projected date for execution of the construction contract is November 2013 and for completion of construction is January 2014.

Ref: Supporting document pages 34-40
Item 7.  Agency: F03  Budget and Control Board  Project: 9912, Rutledge Building Emergency Generator Installation

Action Proposed: Establish Construction Budget for $723,945.00
(Add $718,045.00 [9] Other, Depreciation Reserve)

Purpose: To install an emergency generator in the Rutledge Building housing the Department of Education. The project was established in October 2012 for pre-design work which is now complete. The work will include installing a new emergency generator and automatic transfer switches and upgrading the electrical system to provide power from the generator to life safety and other systems. The 50 year-old building would be required to have an emergency generator if built today. The new generator will provide backup power for the fire pump, egress lighting, elevators, fire detection and notification systems, and information technology operations. Its installation will bring this part of the building up to current standards and prevent elevator passengers from being stranded during power outages as happened recently. Energy savings and conservation measures are not applicable to this generator project. The agency reports the total projected cost of this project is $723,945 and no additional annual operating costs will result from the project. The agency also reports the projected date for execution of the construction contract is October 2013 and for completion of construction is May 2014.

Ref: Supporting document pages 41-46

Item 8.  Agency: J12  Department of Mental Health  Project: 9721, Campbell Veterans Nursing Home Deferred Maintenance

Action Proposed: Establish Construction Budget for $1,678,571.00
(Add $928,571.00 [7] Federal)

Purpose: To replace the mechanical system at the Department of Mental Health’s Campbell Veterans Nursing Home in Anderson. The project was established in November 2011, with Capital Reserve Funds appropriated for deferred maintenance at this facility, to repair the pond dam and do pre-design work for the mechanical system replacement, which are now complete. The remaining work on the project will include replacing two 200-ton chillers, associated pumps and the mechanical control systems serving the facility. The mechanical system is 22 years old, original to the building, and past its life expectancy and the chillers are failing. Energy savings and conservation measures will include the installation of energy efficient chillers and variable speed pumps. The agency reports the total projected cost of this project is $1,678,571 and annual operating cost savings of $16,000 will result in the three years following project completion. The agency also reports the projected date for execution of the construction contract is December 2013 and for completion of construction is December 2014.

Ref: Supporting document pages 47-52
Item 9. Agency: J12 Department of Mental Health
Project: 9722, Stone Veterans Nursing Home Deferred Maintenance

Action
Proposed: Establish Construction Budget for $3,800,000.00

(Add $2,470,000.00 [7] Federal)

Purpose: To address deferred maintenance and renovate the Department of Mental Health’s Stone Veterans Nursing Home in Columbia. The project was established in November 2011, with Capital Reserve Funds appropriated for deferred maintenance at this facility, for pre-design work which is now complete. The work in the 45,684 square foot facility will include renovating client rooms and restrooms, upgrading handrails, wall protection, and the lighting, nurse call and fire alarm systems, replacing flooring and windows, renovating the mechanical system, replacing the roof, and abating asbestos. The facility is 41 years old and most of the features and finishes are original to the building. The roof is 20 years old and beginning to leak. Energy savings and conservation measures will include the installation of energy efficient windows, roofing with better insulated components, and a mechanical control system to better regulate and control temperatures. The agency reports the total projected cost of this project is $3,800,000 and no additional annual operating costs will result from the project. The agency also reports the projected date for execution of the construction contract is November 2013 and for completion of construction is December 2014.

Ref: Supporting document pages 53-58
Item 10.  Agency: H12  Clemson University  Project: 9864, CURI - Graduate Education Center Construction and Lasch Lab Upfit/Land Acquisition

Action Proposed: Increase Budget from $10,420,000.00 to $23,520,000.00

(Add $8,000,000.00 [7] Federal)
(Add $5,100,000.00 [9] Other, Private Gifts)

Purpose: To upfit the Lasch Lab and construct a new Graduate Education Center at the Clemson University Restoration Institute (CURI) in North Charleston. The project was established in November 2005 and increased to establish the construction budget in December 2006 when Research University Infrastructure Bonds were certified for use in the project. The work will now include upfitting approximately 45,971 square feet in the Lasch Lab and constructing an approximately 51,000 square foot Graduate Education Center (GEC). The budget increase is due to the increased size of the facility, originally planned for approximately 22,000 square feet, required to house the Restoration Institute, industry partnering spaces and student oriented spaces. The Lasch Lab upfit is needed to develop and improve new technologies to conserve large metallic objects from marine environments. The GEC will be a mixed use teaching, electronic lab and research facility which will serve as the core of the CURI campus. The facility will be constructed to LEED Silver certification and will include many energy savings and conservation measures. The LEED cost benefit analysis shows a negative cost benefit of $202,500 at this phase of design based on preliminary figures, but Clemson staff anticipate the negative benefit will be negligible once the design nears completion. The agency reports the total projected cost of this project is $23,520,000 and additional annual operating costs ranging from $400,350 to $416,524 will result in the three years following project completion. The agency also reports the projected date for execution of the construction contract is August 2014 and for completion of construction is December 2016.

Ref: Supporting document pages 59-66
Item 11. Agency: J12 Department of Mental Health  
Project: 9724, Bryan Hospital/Morris Village Energy Plant Chiller Replacements

**Action Proposed:** Increase Budget from $1,925,000.00 to $2,025,000.00

(Add $100,000.00 [9] Other, Operating Revenue)

**Purpose:** To meet current cost estimates to replace two chillers and a cooling tower serving the Department of Mental Health’s Bryan Hospital and Morris Village. The project was established for pre-design in June 2012 and the full design and construction budget was approved in October 2012. During the full design phase, it became evident to the electrical engineer that the electrical equipment needed replacing to service the new chillers. In addition, a new step-down transformer is needed for the variable speed chillers, roll-up doors are being replaced, and some framing will be modified to accommodate the new chillers. This work was not included in the pre-design cost estimate or determined to be needed until full design was almost complete. Mechanical cost estimates and the contingency have been reduced to accommodate much of the increase, but additional funds are needed to bid the project. Energy savings and conservation measures will include the installation of energy efficient chillers, pumps and variable speed drives. The agency reports the total projected cost of this project is $2,025,000 and annual operating cost savings of $53,120 will result in the three years following project completion. The agency also reports the projected date for execution of the construction is July 2013 and for completion of construction is June 2014.

Ref: Supporting document pages 67-71

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**Item 12. Agency: P24 Department of Natural Resources  
Project: 9933, Charleston - Dungannon Plantation Land Acquisition**

**Action Proposed:** Establish Preliminary Land Acquisition

**Total budget** $20,000.00 [9] Other, Heritage Land Trust Fund $20,000.00

**Purpose:** To procure the investigative studies required to adequately evaluate property prior to purchase. The Department of Natural Resources is considering the purchase of approximately 88 acres of land in Charleston County adjacent to the Dungannon Plantation Heritage Preserve and Wildlife Management Area. The acquisition will protect significant natural and cultural areas, including endangered species. The property provides habitat for the second largest colony of federally endangered wood stork in the state and other wading bird species and will offer additional recreational opportunities to the public.

Ref: Supporting document pages 72-76