

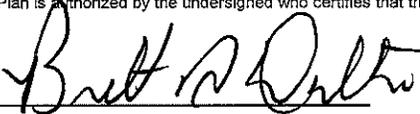
**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP): COVER SHEET**

AGENCY NUMBER: H12 NAME: Clemson University

**1. CPIP SUBMISSION AUTHORIZATION ON AVAILABILITY OF FUNDS**

This submission presents this agency's Comprehensive Permanent Improvement Plan (CPIP) for fiscal years 2015-16, 2016-17, and for the following three fiscal years (2017-18, 2018-19, 2019-20). The plan includes all permanent improvements (as defined in the Budget and Control Board's Part I Manual and in Code Section 2-47-50) which are projected and proposed for those years by this agency as of the date this document is signed.

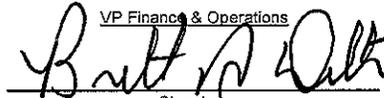
The submission of this Comprehensive Plan is authorized by the undersigned who certifies that the information presented is true and correct.

Signature   
 Typed Name Brett A. Dalton  
 Title VP Finance & Operations  
 Date \_\_\_\_\_

**2. CERTIFICATION THAT ALL FUNDS AVAILABLE HAVE BEEN APPLIED IN PLAN**

We certify that all funds available to this agency from its own sources or capabilities for financing permanent improvements have been applied to projects proposed in this Plan. For 2015-16, we certify that the funds projected for expenditure are, or with reasonable certainty will be, available to this agency.

Agency Head  
  
 Signature  
James P. Clements, President  
 Typed Name and Title

VP Finance & Operations  
  
 Signature  
Brett A. Dalton, VP Finance & Operations  
 Typed Name and Title

**3. AGENCY CONTACT PERSON(S) ON THIS CPIP ARE:**

Name: Andrea Owens-Meadows Phone 864-656-5701  
 Name: Carol Routh Phone 803-737-0336

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- |           |       |
|-----------|-------|
| 10. _____ | _____ |
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**SUBMIT ORIGINAL (UNBOUND) TO:**

CAPITAL BUDGETING UNIT  
 EXECUTIVE BUDGET OFFICE  
 1205 PENDLETON STREET, SUITE 529  
 COLUMBIA, SOUTH CAROLINA 29201

## Narrative Summary of the Five-Year Plan

### Introduction

The Clemson University Comprehensive Permanent Improvement Plan (CPIP) provides a multi-year report of proposed construction and renovation projects for fiscal years 2016 – 2020. The plan also provides estimated project costs by project and identifies the funding sources that will support each project. The projects included in this plan as of March 31, 2015, have been reviewed internally for suitability of scope, cost and funding strategy.

Clemson University's comprehensive capital plan is comprised of four major portfolios:

- Educational & General - academic, research, student service, economic development, and other core mission facilities
- Public Service & Agriculture (PSA CPIP submitted separately) – Research & Education Centers, Simpson Station, Baruch Institute, South Carolina Botanical Gardens, etc.
- Auxiliary Services – housing, dining, parking, and other retail facilities
- Athletics – stadium, basketball arena, baseball field, etc.

Each project and portfolio is developed and evaluated within the broader context of the University's mission and strategic goals, current and forecasted economic and financial conditions, and facility and programmatic needs and objectives.

It is important to note that the University has recently undergone a presidential and provost transition. President James Clements joined

the University as its fifteenth president in January 2014. Executive Vice President for Academic Affairs and Provost Robert Jones joined the University in September 2014. As a result, a new strategic plan, 2020Forward, is currently being developed and academic facilities priorities are being evaluated and vetted. As such, the only academic building priority reflected in this plan is the construction of the replacement for Surrine Hall, which was reflected in the University's 2014 CPIP. The new facility will serve as the new home of the College of Business and Behavioral Sciences (CBBS), which currently resides in 76 year-old Surrine Hall. The facility has had no significant renovation in 35 years and no longer provides adequate space for long-term growth or modern instructional delivery methods.

Investments identified as priorities were developed through conscious, data-driven, rational assessments of the University's utility and building infrastructure in relation to the demands of the families and students that Clemson serves. Clemson has identified projects that are essential to fulfilling its mission of providing a high quality, affordable education to the residents of South Carolina and has worked diligently to develop a responsible strategy for addressing the educational, infrastructure, housing, and student life needs of the University.

Clemson has identified several key capital planning focus areas:

1. Maintenance of Critical Utility and Infrastructure Systems (Electrical Distribution Systems Upgrades & Renovations)
2. Academic (Surrine Hall Replacement)
3. Student Services (Outdoor Fitness & Wellness Center)
4. Auxiliaries & Athletics (Football Operations Center, Child Care Center)

**1. What is the condition and adequacy of your existing facilities? Demand trends? What is the total amount of your agency's maintenance needs?**

The University's main campus encompasses approximately 500 acres, with more than 250 facilities. Clemson experienced a rapid building boom in the 1950's and 1960's (Martin Hall, Daniel Hall, Johnstone, Clemson House), and there are a number of buildings on campus that were built in the late 1920's to 1930's (Sirriner Hall, Fike). Despite the construction age of the University's facilities, through thoughtful, proactive management of maintenance, renovations and capital renewal, Clemson's E&G facilities have an average renovation age of 42 years.

Clemson University is focused on maintenance and the role that maintenance and renovations play in the proper stewardship and protection of capital assets. This includes preventative maintenance programs, targeted demolitions, repurposing of existing facilities, and new construction to protect, enhance and extend the life of capital assets. Clemson's maintenance and capital renewal investments result from conscious, data-driven decisions as part of a rational capital plan and resource allocation strategy.

For example, Clemson University participates in the South Carolina Commission on Higher Education building condition survey every three years. According to the SC CHE 2014 Building Condition Survey and taking into consideration inflation, changes in space and building conditions over the life of the 2020 Capital Plan, Clemson will need to invest nearly \$250M to properly protect facilities through annual maintenance.

The SC CHE survey relies on assessments conducted by trained, internal facilities staff members. The University also recognizes

the importance of objective, third-party assessments and benchmarking studies to ensure responsible, data-driven decisions. Therefore, Clemson has engaged with Sightlines, an industry leader in facility management analysis, to assess Clemson's facilities and investments in maintenance, renovations, and capital stewardship and renewal, as well as determine appropriate levels for long-term funding.

The most recent study by Sightlines identified that the University's E&G facilities are older, on average, than its peers, while Clemson's asset reinvestment backlog was less than land grant universities Sightlines observed and that this reflects the University's practice of maintaining and using its existing assets effectively; however, the demands of current instructional methods make many of the existing facilities inadequate for future academic goals. Other findings included:

- Approximately 38% of E&G facilities are over 50 years old.
- Nearly 28% are between 25 - 50 years old.
- Over two thirds of the University's E&G facilities have building and envelope life cycles due for replacement.

While the current facilities are adequately maintained, Clemson's facilities are presenting challenges to the University's educational programming and ability to compete with other top tier universities. The layout and design of classroom and lab facilities are an integral component of the learning process and, with 66% of the facilities over 25 years old, the ability to provide the space for these modern educational methods becomes more difficult.

In terms of new space, E&G space has increased approximately 7% since 2008, primarily attributable to the new Life Sciences Building replacing Long Hall, built in 1937, and the Lee Hall

(built 1958) renovation and annex. During that time period, the campus population increased 19%. Excluding these two critical replacements, E&G space increased only 2%.

Additionally, modern facilities are critical to recruitment and retention efforts. A study conducted by the APPA Leadership in Educational Facilities Management Institute demonstrated the impact of facilities on recruitment efforts. Over 66% of students noted that the overall quality of campus facilities was essential or very important to their decision (APPA.org, 2006). Moreover, the quality of campus facilities ranked higher than the technology capabilities, extracurricular opportunities, and the prestige of the university in impacting a student's decision to attend a particular university. In order to remain competitive with other top tier universities from an academic and student life standpoint and to ensure yield rates remain at consistent levels, providing quality campus facilities is crucial.

As a result of the Sightlines Auxiliary study, which identified several challenges given the University's housing stock, Clemson began construction on two critical housing projects this year – Douthit Hills Development and Core Campus. Over the past several years, Clemson has seen a decrease in total upperclassmen housing participation, largely due to a 28% increase in enrollment since 2004 with no increase in new housing bed inventory. The lack of growth in housing facilities has forced sophomores, juniors and seniors to live off-campus, as opposed to living in safer, affordable on-campus facilities proven to enhance the student experience and improve classroom performance. The Douthit Hills Development will address this critical housing issue, by adding 980 upperclassmen beds and 788 Bridge student beds to the housing inventory.

Also noted by Sightlines, the majority of Clemson's housing stock has exceeded the typical useful life. With an average

renovation age of 35 years, the current housing stock has become insufficient to provide competitive housing to students. The Core Campus project, currently under construction, will replace the Johnstone Hall facilities, built as temporary housing with 689 beds, and allow the University to provide housing consistent with top tier universities for a larger portion of the student body.

**2. What is your approach to maintaining existing facilities in acceptable condition? How are maintenance needs addressed? If your agency has an account dedicated to maintenance needs, what is the name of that account and what is its uncommitted balance?**

Clemson is committed to the stewardship and protection of its capital assets through responsible maintenance practices, as evidenced by Clemson's increasing investments in maintenance funding over the last several years. For example:

- Clemson spent more than \$29M in routine and preventative maintenance in FY 2014, which includes the maintenance of all E&G and Housing facilities, grounds, and equipment.
- Departmental funding, lab fee revenues and central campus allocations provide funding for University capital projects, which contribute to decreasing the overall maintenance backlog. Capital project spending in FY 2014 was nearly \$36M for E&G and Housing facilities, nearly double the investment levels in FY 2007.

To ensure that the University continues to address maintenance and capital stewardship and renewal needs, the University maintains dedicated resources on an annual basis. For example:

- **Maintenance, Repair, and Renovation (MR&R)** – Dedicated funding for projects supports the non-routine or

recurring maintenance and repair of E&G facilities and major equipment replacements associated with building systems. In FY 2011, dedicated allocations to MR&R were \$2.2M annually. The University has dramatically increased its dedicated allocations to the MR&R projects over the last several years. By the end of FY 2015, the University will have responsibly invested an additional \$5.7M in permanent allocations for MR&R, bringing the allocation to over \$7.9M annually.

- **Maintenance & Stewardship Fund** - Since 2007, Clemson has contributed funding annually to a dedicated fund for stewardship maintenance. Between FY 2009 and FY 2014, the University's average annual contribution was over \$10M. All balances are currently planned for stewardship maintenance projects.

Annual asset stewardship investments are determined through a number of mechanisms including semi-annual building envelope inspections, annual inspections of the electrical, HVAC, plumbing, fume hoods, boilers, fire codes, and elevators, quarterly containment inspections, space planning and utilization assessments, complete building condition assessments, customer surveys, and input from the University Facility Advisory Committee. These efforts allow Clemson to effectively prioritize projects and target potential issues before becoming significant improvement projects. Clemson has demonstrated the responsible management and stewardship of funds dedicated to maintenance efforts. According to a peer assessment by Sightlines, Clemson University's Operations & Maintenance Staff has fewer resources to support daily service than peers, but are covering more area than their counterparts at a higher level of customer satisfaction.

### 3. What are your facility replacement and addition needs?

Clemson is committed to protecting, enhancing, and extending the life of its capital assets through responsible asset stewardship and reinvestment policies. Clemson establishes investments in capital priorities based on a thorough analysis of data and metrics, which takes into consideration programmatic and competitive priorities, long-range infrastructure requirements, and critical maintenance needs. As part of these assessments, Clemson conducts extensive cost benefit analyses on each facility to determine whether renovating, repurposing, maintaining at existing levels or demolishing the facility is the most fiscally responsible course of action.

While Clemson has dedicated itself to the maintenance and responsible stewardship of its facilities, a number of the facilities have outlived their useful lives and purposes. Clemson's 2020Forward plan will continue to provide the opportunity to address critical maintenance and infrastructure issues and provide enhanced educational, housing, and student life facilities.

As it relates specifically to projects included in the CPIP, highlights include:

- **Replacement of Critical Utility Infrastructure and Aging Facilities**
  - Electrical Distribution System Upgrade & Renovation will upgrade portions of the 50-and 60-year-old distribution system to improve system reliability and enhance life safety issues.
- **Replacement and Enhancement of Academic Spaces for Improved Learning**
  - The over 75-year-old Serrine Hall will be replaced with a new building, thus providing space for growth, a centralized location for instruction and research, and an environment that will support

greater collaboration and interactions with industry partners.

- Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital project priorities that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.
- **Replacement of Campus Recreational Space for Students**
  - Clemson University does not have the capacity to support the recreational, fitness and wellness needs of its growing student population with its current infrastructure. The Outdoor Fitness & Wellness Center project will replace and enhance recreational spaces and wooden facilities that are at the end of their useful lives.

#### **4. What is the theme of your five-year CPIP? How does it address these questions?**

Consistent with the University's 2020 Road map and the 2020 Forward plan, currently under development, the theme of this five-year CPIP is focused on maintaining and replacing end-of-life utility infrastructure, providing student services facilities that reflect a top-tier institution and meet student expectations, and strategically renovating, replacing, repurposing and constructing other facilities that support the University's core mission of teaching, research and public service.

As stated previously, Clemson's facilities are presenting challenges to the University's educational programming and ability to compete with

other top-quality universities. The University has identified capital investments and strategies through a conscious, data-driven, rational assessment of the University's utility and building infrastructure in relation to the demands of the families and students that Clemson serves. Clemson has identified projects that are essential to fulfilling its mission of providing a high quality, affordable education to the residents of South Carolina and has worked diligently to develop a responsible strategy for addressing the educational, infrastructure, housing, and student life needs of the University. All projects in this plan have been reviewed internally for suitability of scope, cost and funding strategy within the University's strategic framework.



**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP): FINANCIAL SUMMARY OF THE FIVE-YEAR PLAN**

AGENCY NUMBER: H12

NAME: Clemson University

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(1)	(2) Plan Year 1 2015-16	(3) Plan Year 2 2016-17	(4) Plan Year 3 2017-18	(5) Plan Year 4 2018-19	(6) Plan Year 5 2019-20	(7) Grand Total Years 1-5
<b>1. NUMBER OF PROPOSED PROJECTS</b> (from Forms C2)						
<b>2. ESTIMATED COSTS AND PROPOSED FUND SOURCES</b>						
0 Capital Improvement Bonds						
1 Departmental CIB						
2 Institution (Tuition) Bonds	92,875,000.00					92,875,000.00
3 Revenue Bonds	62,000,000.00		14,000,000.00			76,000,000.00
4 Excess Debt Service						
5 Capital Reserve Fund						
6 Appropriated State						
7 Federal						
8 Athletic						
9 Other	8,125,000.00		28,200,000.00	7,200,000.00		43,525,000.00
<b>TOTAL</b>	163,000,000.00		42,200,000.00	7,200,000.00		212,400,000.00

**Footnotes:**

- Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital projects that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.
- Costs presented above for years 2 through 5 are subject to change due to ongoing planning and evaluation of each project, including consideration of market factors such as inflation, interest rates, student demand, etc.

**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

AGENCY NUMBER:     H12     NAME:     Clemson University    

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PROJECT PROPOSED FOR PLAN YEAR (Check One):

1: 2015-16 <u>  X  </u>	2: 2016-17 <u>    </u>	3: 2017-18 <u>    </u>	4: 2018-19 <u>    </u>	5: 2019-20 <u>    </u>
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PRIORITY NUMBER	PROJECT NAME	ESTIMATED COST	PROPOSED SOURCE(S) OF FUNDS
1	Electrical Distribution System Upgrades and Replacements	75,000,000.00	Institution Bonds and Other - Maintenance & Stewardship Fund
2	Outdoor Fitness and Wellness Center Construction	21,000,000.00	Institution Bonds & Other - Private Gifts
3	Child Care Center Construction	5,000,000.00	Other - Other Operating Funds
4	Football Operations Facility Construction	62,000,000.00	Athletic Facilities Revenue Bonds
Project(s) currently under review by the University for year 1 approval: <sup>1</sup>			
5	Sirrine Hall Replacement		Budget & Sources of Funds TBD
6	Vickery Hall Renovation		Budget & Sources of Funds TBD
7			
8			
9			
10			
11			
12			
13			
14			
<b>TOTAL</b>		163,000,000.00	

**Footnotes:**

1. The projects under this category are currently undergoing evaluation, so the university has not fully identified the scope of work and/or budget at the time of the CPIP submission. The University plans to bring these projects forward for interim approval in year 1, once the projects have been fully vetted and approved by Clemson University's Board of Trustees.

2. Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital projects that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.

**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

Agency Number: H12 Name: Clemson University

PROJECT PROPOSED FOR PLAN YEAR (Check One): 1: 2015-16 X 2: 2016-17    

1. Project Name: Electrical Distribution System Upgrades and Replacements

3. Project Type: Repair/Renovate Existing Facilities 100 %

2. Project Priority: 1 of 6 in Plan Year

4. Facility Type: Utilities 100 %

**5. What is the project?**

This project involves upgrading the main campus electrical distribution system, which was predominantly constructed in the late 1950's through mid-1960's. The work to be done will include replacing aging electrical distribution infrastructure, creating a redundant loop feed system to eliminate single point system failure possibilities, adding communication and distribution automation capability to all switches to reduce outage durations, and developing a central operations location to monitor and control a Distribution Automation System. It will also include converting remaining exposed overhead electrical facilities to underground, adding metering and controls to equipment in campus buildings with aging utility transformers and main gear, and making modifications to the campus electrical system to allow for increased use of on-campus power generation and alternative energy. The project will be a multi-year project to replace vulnerable sections of the aging electrical infrastructure to improve system reliability in areas which have higher probability of failure impacting major academic, research and student life activities.

The total projected cost of this project is \$ 75,000,000.

Attach Form C4 for additional annual operating costs or savings for each proposed new project.

**8. Total estimated project cost:**

1.	_____	Land Purchase	Land	_____	Acres
2.	_____	Building Purchase	Floor Space:	_____	Gross Square Feet
3.	<u>6,400,000.00</u>	Professional Services Fees			
4.	_____	Equipment and/or Materials	Information Technology	\$ _____	
5.	<u>370,000.00</u>	Site Development			
6.	_____	New Construction	Floor Space:	_____	Gross Square Feet
7.	_____	Renovations - Building Interior	Floor Space:	_____	Gross Square Feet
8.	<u>54,820,000.00</u>	Renovations - Utilities			
9.	_____	Roofing	_____	Roof Age	
10.	_____	Renovations - Building Exterior			
11.	_____	Other Permanent Improvements			
12.	_____	Landscaping			
13.	_____	Builders Risk Insurance			
14.	_____	Other Capital Outlay			
15.	<u>3,260,000.00</u>	Labor Costs			
16.	_____	Bond Issue Costs			
17.	<u>1,650,000.00</u>	Other			
18.	<u>8,500,000.00</u>	Contingency			
		<u>\$ 75,000,000.00</u>	<b>TOTAL PROJECT BUDGET</b>		

**6. Why is the project needed?**

The current system, which is the backbone of the University's utility system, was predominantly constructed in the late 1950's through mid-1960's. More than 70% of the main substation gear and manual switching, transformation, system protection and electrical conductors are beyond a 50-year life. Continued operation of this system without major improvements and replacements will lead to a much higher probability of system failure, power interruptions, and extended outages. Multiple occurrences of the failure of a single piece of equipment have taken place that resulted in power outages to the entire campus.

**7. What alternatives to this project were considered?**

There are no reasonable alternatives to this project.

**9. Proposed Source of Funds**

0.	_____	Capital Improvement Bonds	
1.	_____	Departmental CIB	
2.	<u>73,875,000.00</u>	Institution (Tuition) Bonds	
3.	_____	Revenue Bonds	
4.	_____	Excess Debt Service* ( )	
5.	_____	Capital Reserve Fund	
6.	_____	Appropriated State	
7.	_____	Federal	
8.	_____	Athletic	
9.	<u>1,125,000.00</u>	Other* ( Maintenance and Stewardship )	
		<u>\$ 75,000,000.00</u>	<b>TOTAL</b>

\* Specify Type

**10. Project Schedule**  
(for 2015-16 only)

A. Estimated Start Date:	<u>Summer 2015</u>
B. Estimated Completion Date:	<u>Fall 2019</u>
C. Estimated Total Expenditures	
(1) In 2015-2016 Year	\$ <u>1,500,000.00</u>
(2) After 2015-2016 Year	\$ <u>73,500,000.00</u>
(3) Total Project Cost	\$ <u>75,000,000.00</u>



**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

Agency Number: H12 Name: Clemson University

PROJECT PROPOSED FOR PLAN YEAR (Check One): 1: 2015-16 X 2: 2016-17   

1. Project Name: Outdoor Fitness and Wellness Center Construction

3. Project Type: Construct Additional Facility 100 %

2. Project Priority: 2 of 6 in Plan Year

4. Facility Type: Program 100 %

**5. What is the project?**

This project involves replacing and enhancing recreational spaces and old wooden facilities on a currently under-utilized property on Lake Hartwell to serve Clemson students. The Outdoor Fitness and Wellness Center project will include demolishing old facilities and constructing an approximately 16,000 square foot outdoor recreation and education center, a 7,000 square foot open air pavilion, a 3,000 square foot restroom facility, and related infrastructure. It will also include developing a fully lit soccer field, two fully lit softball fields, an access road, and open space improvements near the lake to support large special events.

The total projected cost of this project is \$ 18,000,000.

Attach Form C4 for additional annual operating costs or savings for each proposed new project.

**8. Total estimated project cost:**

1. _____	Land Purchase	Land	_____	Acres
2. _____	Building Purchase	Floor Space:	_____	Gross Square Feet
3. <u>1,800,000.00</u>	Professional Services Fees			
4. _____	Equipment and/or Materials	Information Technology	\$ _____	
5. _____	Site Development			
6. <u>15,300,000.00</u>	New Construction	Floor Space:	<u>26,000</u>	Gross Square Feet
7. _____	Renovations - Building Interior	Floor Space:	_____	Gross Square Feet
8. _____	Renovations - Utilities			
9. _____	Roofing	_____	Roof Age	
10. _____	Renovations - Building Exterior			
11. _____	Other Permanent Improvements			
12. _____	Landscaping			
13. _____	Builders Risk Insurance			
14. _____	Other Capital Outlay			
15. _____	Labor Costs			
16. _____	Bond Issue Costs			
17. <u>2,200,000.00</u>	Other - Various Internal Costs			
18. <u>1,700,000.00</u>	Contingency			
	<u>\$ 21,000,000.00</u>	<b>TOTAL PROJECT BUDGET</b>		

**6. Why is the project needed?**

The recreational facility will allow for increased recreational use of the South Ravenel property on Lake Hartwell. Limited access has been provided for students to fully utilize the lake for academic and recreational uses, and current recreational facilities are at the end of their useful lives. The project will provide a well designed fitness and wellness center with outdoor athletic fields for all intramural and club sports that will meet the demands for current and future student populations while leveraging Clemson's unique natural resources. It will elevate the student health and wellness experience to a level commensurate with a Top 20 public institution.

**7. What alternatives to this project were considered?**

There are no reasonable alternatives as existing structures are at the end of their useful lives.

**9. Proposed Source of Funds**

0. _____	Capital Improvement Bonds	
1. _____	Departmental CIB	
2. <u>19,000,000.00</u>	Institution (Tuition) Bonds	
3. _____	Revenue Bonds	
4. _____	Excess Debt Service* ( )	
5. _____	Capital Reserve Fund	
6. _____	Appropriated State	
7. _____	Federal	
8. _____	Athletic	
9. <u>2,000,000.00</u>	Other* (Private Gifts) ( )	
	<u>\$ 21,000,000.00</u>	<b>TOTAL</b>

\* Specify Type

**10. Project Schedule**  
(for 2015-16 only)

A. Estimated Start Date:	<u>Fall 2015</u>
B. Estimated Completion Date:	<u>Spring 2018</u>
C. Estimated Total Expenditures	
(1) In 2015-2016 Year	\$ <u>250,000.00</u>
(2) After 2015-2016 Year	\$ <u>17,750,000.00</u>
(3) Total Project Cost	\$ <u>18,000,000.00</u>



**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

Agency Number: H12 Name: Clemson University

PROJECT PROPOSED FOR PLAN YEAR (Check One): 1: 2015-16 X 2: 2016-17    

1. Project Name: Child Care Center Construction

3. Project Type: Construct Additional Facility 100 %

2. Project Priority: 3 of 6 in Plan Year

4. Facility Type: Program 100 %

**5. What is the project?**

This project will construct an approximately 12,700 square foot child care facility that will serve Clemson faculty, staff and students. The center will be managed and operated through a third-party vendor and provide a safe, secure, and stimulating learning environment for infants, toddlers, and preschool-aged children, ages 6 weeks to 5 years old. The facility will include classrooms, outdoor play areas, laundry, office spaces, storage, parking and appropriate fencing/lighting to promote safety. The location on the periphery of campus will be easily accessible via using campus transit services and allows for convenient parent drop off/pick up.

The facility will be constructed and managed to meet National Association for the Education of Young Children (NAEYC)'s accreditation standards. There are currently no nationally accredited child care facilities within 25 miles of Clemson, with the exception of Head Start or other at-risk programs.

**The total projected cost of this project is \$ 5,000,000.**

Attach Form C4 for additional annual operating costs or savings for each proposed new project.

**8. Total estimated project cost:**

1. _____	Land Purchase	Land	_____	Acres
2. _____	Building Purchase	Floor Space:	_____	Gross Square Feet
3. <u>340,000.00</u>	Professional Services Fees			
4. _____	Equipment and/or Materials	Information Technology	\$ _____	
5. _____	Site Development			
6. <u>3,350,000.00</u>	New Construction	Floor Space:	<u>12,700</u>	Gross Square Feet
7. _____	Renovations - Building Interior	Floor Space:	_____	Gross Square Feet
8. _____	Renovations - Utilities			
9. _____	Roofing	_____	Roof Age	
10. _____	Renovations - Building Exterior			
11. <u>470,000.00</u>	Other Permanent Improvements			
12. _____	Landscaping			
13. _____	Builders Risk Insurance			
14. <u>400,000.00</u>	Other Capital Outlay			
15. _____	Labor Costs			
16. _____	Bond Issue Costs			
17. _____	Other			
18. <u>440,000.00</u>	Contingency			
<b>\$ <u>5,000,000.00</u> TOTAL PROJECT BUDGET</b>				

**6. Why is the project needed?**

Currently, Clemson is the only Top 25 public university in the U.S. and the only major university in South Carolina that does not offer child care services. Approximately 86% of over 1,100 students, faculty and staff who participated in a 2012 survey indicated it was very important for Clemson to have child care. Child care services will aid in the recruitment and retention efforts of top faculty, staff and doctoral students, as well as provide opportunities for enhanced work productivity.

**7. What alternatives to this project were considered?**

Several alternatives were considered, including constructing a facility in the center of campus and leasing an off-campus space. The proposed project is the most financially viable, long-term option.

**9. Proposed Source of Funds**

0. _____	Capital Improvement Bonds	
1. _____	Departmental CIB	
2. _____	Institution (Tuition) Bonds	
3. _____	Revenue Bonds	
4. _____	Excess Debt Service* ( )	
5. _____	Capital Reserve Fund	
6. _____	Appropriated State	
7. _____	Federal	
8. _____	Athletic	
9. <u>5,000,000.00</u>	Other* (Operating Funds)	)
<b>\$ <u>5,000,000.00</u> TOTAL</b>		

\* Specify Type

**10. Project Schedule**  
(for 2015-16 only)

A. Estimated Start Date:	<u>Oct-15</u>
B. Estimated Completion Date:	<u>Oct-18</u>
C. Estimated Total Expenditures	
(1) In 2015-2016 Year	\$ <u>250,000.00</u>
(2) After 2015-2016 Year	\$ <u>4,750,000.00</u>
(3) Total Project Cost	\$ <u>5,000,000.00</u>



**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

Agency Number: H12 Name: Clemson University

PROJECT PROPOSED FOR PLAN YEAR (Check One): 1: 2015-16 X 2: 2016-17   

1. Project Name: Football Operations Facility Construction

3. Project Type: Construct Additional Facility 100 %

2. Project Priority: 4 of 6 in Plan Year

4. Facility Type: Athletics 100 %

**5. What is the project?**

This project will involve constructing a football operations facility of approximately 157,000 square feet to house all football operational functions. The facility will include coaches' offices, team meeting rooms, student-athlete and coach locker rooms, a weight room, training room, equipment room, dining facility, and related spaces. The facility will be constructed near the Indoor Football Practice Facility and the outdoor practice fields and will bring all football activity into close proximity.

The total projected cost of this project is \$ 62,000,000.

Attach Form C4 for additional annual operating costs or savings for each proposed new project.

**8. Total estimated project cost:**

1.	Land Purchase	Land	Acres
2.	Building Purchase	Floor Space:	Gross Square Feet
3.	<u>6,000,000.00</u> Professional Services Fees		
4.	<u>4,600,000.00</u> Equipment and/or Materials	Information Technology	\$
5.	Site Development		
6.	<u>43,000,000.00</u> New Construction	Floor Space:	<u>157,000</u> Gross Square Feet
7.	Renovations - Building Interior	Floor Space:	Gross Square Feet
8.	Renovations - Utilities		
9.	Roofing	Roof Age	
10.	Renovations - Building Exterior		
11.	Other Permanent Improvements		
12.	Landscaping		
13.	Builders Risk Insurance		
14.	Other Capital Outlay		
15.	<u>2,200,000.00</u> Labor Costs		
16.	Bond Issue Costs		
17.	Other		
18.	<u>6,200,000.00</u> Contingency		
	<u>\$ 62,000,000.00</u> <b>TOTAL PROJECT BUDGET</b>		

**6. Why is the project needed?**

Current facilities are not sufficient in square footage and an additional 45% increase in square footage would place the University more in line with comparable football facilities across the nation. It is equally important that the location of this building be adjacent to the current indoor and outdoor football practice facilities. Further, NCAA governance changes have been and will continue to affect both staff sizes and additional programming that the University can provide to its student athletes. This new building will allow the Athletic Department to better serve the needs of its student athletes now and will provide needed space in the future as additional governance changes take place.

**7. What alternatives to this project were considered?**

There are no alternatives to this project. The football program needs a consolidated operations center for the continued success of the program.

**9. Proposed Source of Funds**

0.	Capital Improvement Bonds	
1.	Departmental CIB	
2.	Institution (Tuition) Bonds	
3.	<u>62,000,000.00</u> Revenue Bonds	
4.	Excess Debt Service* ( )	
5.	Capital Reserve Fund	
6.	Appropriated State	
7.	Federal	
8.	Athletic	
9.	Other* ( )	
	<u>\$ 62,000,000.00</u> <b>TOTAL</b>	

\* Specify Type

**10. Project Schedule  
(for 2015-16 only)**

A. Estimated Start Date:	<u>Summer 2015</u>
B. Estimated Completion Date:	<u>Fall 2017</u>
C. Estimated Total Expenditures	
(1) In 2015-2016 Year	\$ <u>8,100,000.00</u>
(2) After 2015-2016 Year	
(3) Total Project Cost	\$ <u>53,900,000.00</u>
	\$ <u>62,000,000.00</u>



**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

Agency Number: H12 Name: Clemson University

PROJECT PROPOSED FOR PLAN YEAR (Check One): 1: 2015-16 X 2: 2016-17   

1. Project Name: Sirriner Hall Replacement

3. Project Type: Construct Additional Facility 100 %

2. Project Priority: 5 of 6 in Plan Year

4. Facility Type: Academic 100 %

**5. What is the project?**

The project will involve constructing a new facility to replace current space in Sirriner Hall, built in 1938. The antiquated academic facility has not had a significant renovation in 35 years and no longer provides adequate space for long-term growth or modern instructional delivery methods. The College of Business and Behavioral Sciences (CBBS) is currently co-located with other academic programs in Sirriner Hall. The replacement facility will become the dedicated, recognizable home for all business and related disciplines within the CBBS and will provide space for the college's administrative offices, outreach and research institutes. Specifically, the Sirriner Hall replacement will include a variety of classrooms and learning laboratories, faculty and administrative offices, study and gathering spaces, and common areas that will encourage more collaboration among students, faculty, staff and business partners. Enhanced classroom space will increase instructional effectiveness and improve the University's ability to recruit top students and faculty.

The total projected cost of this project is \$ \_\_\_\_\_.

Attach Form C4 for additional annual operating costs or savings for each proposed new project.

**8. Total estimated project cost:**

1. _____	Land Purchase	Land	_____ Acres
2. _____	Building Purchase	Floor Space:	_____ Gross Square Feet
3. _____	Professional Services Fees		
4. _____	Equipment and/or Materials	Information Technology	\$ _____
5. _____	Site Development		
6. _____	New Construction	Floor Space:	_____ Gross Square Feet
7. _____	Renovations - Building Interior	Floor Space:	_____ Gross Square Feet
8. _____	Renovations - Utilities		
9. _____	Roofing	_____ Roof Age	
10. _____	Renovations - Building Exterior		
11. _____	Other Permanent Improvements		
12. _____	Landscaping		
13. _____	Builders Risk Insurance		
14. _____	Other Capital Outlay		
15. _____	Labor Costs		
16. _____	Bond Issue Costs		
17. _____	Other - Various Internal Costs		
18. _____	Contingency		
	<b>\$ _____ TOTAL PROJECT BUDGET</b>		

**6. Why is the project needed?**

Sirriner Hall is too small and does not provide the proper space for modern instructional delivery methods. The building's construction does not lend itself readily for the infrastructure demands of a state-of-the-art classroom and learning facility or for the mechanical demands that modern learning laboratories require. The new facility will enhance recruitment and retention of students by providing a facility competitive with top-tier programs, will co-locate all college administrative functions in one building, and will provide 105,000 square feet of swing space in Sirriner Hall, which will allow for the systematic renovation of aging academic and campus facilities.

**7. What alternatives to this project were considered?**

A floor-by-floor, phased renovation of Sirriner Hall was considered as an alternative to this project. However, a phased renovation would take many years to complete, would create disruptions to academic activity, and would increase construction costs.

**9. Proposed Source of Funds**

0. _____	Capital Improvement Bonds	
1. _____	Departmental CIB	
2. _____	Institution (Tuition) Bonds	
3. _____	Revenue Bonds	
4. _____	Excess Debt Service* ( )	
5. _____	Capital Reserve Fund	
6. _____	Appropriated State	
7. _____	Federal	
8. _____	Athletic	
9. _____	Other* ( )	
	<b>\$ _____ TOTAL</b>	

\* Specify Type

**10. Project Schedule  
(for 2015-16 only)**

A. Estimated Start Date:	_____
B. Estimated Completion Date:	_____
C. Estimated Total Expenditures	_____
(1) In 2015-2016 Year	\$ _____
(2) After 2015-2016 Year	\$ _____
(3) Total Project Cost	\$ _____



**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

Agency Number: H12 Name: Clemson University

PROJECT PROPOSED FOR PLAN YEAR (Check One): 1: 2015-16  2: 2016-17

1. Project Name: Vickery Hall Renovation

3. Project Type: Repair/Renovate Existing Facility 100 %

2. Project Priority: 6 of 6 in Plan Year

4. Facility Type: Athletics 100 %

**5. What is the project?**

This project involves renovating Vickery Hall which is used to provide academic support for the University's student athletes. The work will include renovating the building's interior to create a new commons area, additional break-out spaces, more tutoring rooms, a student development suite, offices for advisors and learning specialists, and a food service venue. It will require reconfiguring the space, installing new finishes, ceilings and lighting, reconfiguring the mechanical, electrical and fire protection systems, and constructing an approximately 2,500 to 4,000 square foot addition to provide a double-height common room for informal gathering and study.

The total projected cost of this project is \$\_\_\_\_\_.

Attach Form C4 for additional annual operating costs or savings for each proposed new project.

**8. Total estimated project cost:**

- |           |                                      |                        |                         |
|-----------|--------------------------------------|------------------------|-------------------------|
| 1. _____  | Land Purchase                        | Land                   | _____ Acres             |
| 2. _____  | Building Purchase                    | Floor Space:           | _____ Gross Square Feet |
| 3. _____  | Professional Services Fees           |                        |                         |
| 4. _____  | Equipment and/or Materials           | Information Technology | \$ _____                |
| 5. _____  | Site Development                     |                        |                         |
| 6. _____  | New Construction                     | Floor Space:           | _____ Gross Square Feet |
| 7. _____  | Renovations - Building Interior      | Floor Space:           | _____ Gross Square Feet |
| 8. _____  | Renovations - Utilities              |                        |                         |
| 9. _____  | Roofing                              | _____ Roof Age         |                         |
| 10. _____ | Renovations - Building Exterior      |                        |                         |
| 11. _____ | Other Permanent Improvements         |                        |                         |
| 12. _____ | Landscaping                          |                        |                         |
| 13. _____ | Builders Risk Insurance              |                        |                         |
| 14. _____ | Other Capital Outlay                 |                        |                         |
| 15. _____ | Labor Costs                          |                        |                         |
| 16. _____ | Bond Issue Costs                     |                        |                         |
| 17. _____ | Other                                |                        |                         |
| 18. _____ | Contingency                          |                        |                         |
|           | <b>\$ _____ TOTAL PROJECT BUDGET</b> |                        |                         |

**6. Why is the project needed?**

The renovation of Vickery Hall addresses critical program needs for more tutoring space for student athletes and for better staff distribution and work flow. Reorganized office and tutoring spaces will provide many more individual tutoring rooms, better organization for academic advisors and learning specialists, a student development suite, conference rooms and staff break out space. The renewal will serve current student athletes and the next generation of student athletes with a facility that more fully reflects the depth of the University's dedication to them.

**7. What alternatives to this project were considered?**

Multiple options, including a new building, a larger addition, and more extensive interior renovation were considered. However, this project represents the best-value option to meet the key project goals of providing more tutoring space, improving staff distribution and work flow, and improving students' experiences.

**9. Proposed Source of Funds**

- |          |                             |  |
|----------|-----------------------------|--|
| 0. _____ | Capital Improvement Bonds   |  |
| 1. _____ | Departmental CIB            |  |
| 2. _____ | Institution (Tuition) Bonds |  |
| 3. _____ | Revenue Bonds               |  |
| 4. _____ | Excess Debt Service* ( )    |  |
| 5. _____ | Capital Reserve Fund        |  |
| 6. _____ | Appropriated State          |  |
| 7. _____ | Federal                     |  |
| 8. _____ | Athletic                    |  |
| 9. _____ | Other* ( )                  |  |
|          | <b>\$ _____ TOTAL</b>       |  |

\* Specify Type

**10. Project Schedule  
(for 2015-16 only)**

- |                                 |          |
|---------------------------------|----------|
| A. Estimated Start Date:        | _____    |
| B. Estimated Completion Date:   | _____    |
| C. Estimated Total Expenditures | _____    |
| (1) In 2015-2016 Year           | \$ _____ |
| (2) After 2015-2016 Year        | \$ _____ |
| (3) Total Project Cost          | \$ _____ |



**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

AGENCY NUMBER:           H12           NAME:           Clemson University          

PROJECT PROPOSED FOR PLAN YEAR (Check One):

1: 2015-16 <input type="checkbox"/>	2: 2016-17 <input checked="" type="checkbox"/>	3: 2017-18 <input type="checkbox"/>	4: 2018-19 <input type="checkbox"/>	5: 2019-20 <input type="checkbox"/>
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PRIORITY NUMBER	PROJECT NAME	ESTIMATED COST	PROPOSED SOURCE(S) OF FUNDS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
<b>TOTAL</b>			

**Footnotes:**  
 1. Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital projects that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.

**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

AGENCY NUMBER:     H12     NAME:     Clemson University    

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PROJECT PROPOSED FOR PLAN YEAR (Check One):

1: 2015-16 <input type="checkbox"/>	2: 2016-17 <input type="checkbox"/>	3: 2017-18 <input checked="" type="checkbox"/>	4: 2018-19 <input type="checkbox"/>	5: 2019-20 <input type="checkbox"/>
-------------------------------------	-------------------------------------	--	-------------------------------------	-------------------------------------

PRIORITY NUMBER	PROJECT NAME	ESTIMATED COST	PROPOSED SOURCE(S) OF FUNDS
1	Daniel Hall Renovation	13,000,000.00	Other - Maintenance and Stewardship Fund
2	Mauldin Hall Renovation	6,000,000.00	Other - Housing Improvement Funds
3	Lightsey Bridge I Interior Renovation	9,200,000.00	Other - Housing Improvement Funds
4	Tennis Complex Renovation	14,000,000.00	Athletic Facilities Revenue Bonds
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
<b>TOTAL</b>		42,200,000.00	

**Footnotes:**

- Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital projects that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.
- Costs presented above are subject to change due to ongoing planning and evaluation of each project, including consideration of market factors such as inflation, interest rates, student demand, etc.

**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

AGENCY NUMBER:     H12     NAME:     Clemson University    

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PROJECT PROPOSED FOR PLAN YEAR (Check One):

1: 2015-16 <input type="checkbox"/>	2: 2016-17 <input type="checkbox"/>	3: 2017-18 <input type="checkbox"/>	4: 2018-19 <input checked="" type="checkbox"/>	5: 2019-20 <input type="checkbox"/>
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PRIORITY NUMBER	PROJECT NAME	ESTIMATED COST	PROPOSED SOURCE(S) OF FUNDS
1	Waste Water Treatment Plant Construction	5,200,000.00	Other - Maintenance and Stewardship Fund
2	Johnstone/Union/Harcombe Demolition	2,000,000.00	Other - Housing Improvement Fund
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
<b>TOTAL</b>		7,200,000.00	

**Footnotes:**

1. Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital projects that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.

2. Costs presented above are subject to change due to ongoing planning and evaluation of each project, including consideration of market factors such as inflation, interest rates, student demand, etc.

**2015 COMPREHENSIVE PERMANENT IMPROVEMENT PLAN (CPIP)**

AGENCY NUMBER:     H12     NAME:     Clemson University    

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PROJECT PROPOSED FOR PLAN YEAR (Check One):

1: 2015-16 <input type="checkbox"/>	2: 2016-17 <input type="checkbox"/>	3: 2017-18 <input type="checkbox"/>	4: 2018-19 <input type="checkbox"/>	5: 2019-20 <input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	--

PRIORITY NUMBER	PROJECT NAME	ESTIMATED COST	PROPOSED SOURCE(S) OF FUNDS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
<b>TOTAL</b>			

**Footnotes:**

1. Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital projects that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.

2. Costs presented above are subject to change due to ongoing planning and evaluation of each project, including consideration of market factors such as inflation, interest rates, student demand, etc.

## Narrative Summary of the Five-Year Plan

### Introduction

The Clemson University Comprehensive Permanent Improvement Plan (CPIP) provides a multi-year report of proposed construction and renovation projects for fiscal years 2016 – 2020. The plan also provides estimated project costs by project and identifies the funding sources that will support each project. The projects included in this plan as of March 31, 2015, have been reviewed internally for suitability of scope, cost and funding strategy.

Clemson University's comprehensive capital plan is comprised of four major portfolios:

- Educational & General - academic, research, student service, economic development, and other core mission facilities
- Public Service & Agriculture (PSA CPIP submitted separately) – Research & Education Centers, Simpson Station, Baruch Institute, South Carolina Botanical Gardens, etc.
- Auxiliary Services – housing, dining, parking, and other retail facilities
- Athletics – stadium, basketball arena, baseball field, etc.

Each project and portfolio is developed and evaluated within the broader context of the University's mission and strategic goals, current and forecasted economic and financial conditions, and facility and programmatic needs and objectives.

It is important to note that the University has recently undergone a presidential and provost transition. President James Clements joined

the University as its fifteenth president in January 2014. Executive Vice President for Academic Affairs and Provost Robert Jones joined the University in September 2014. As a result, a new strategic plan, 2020Forward, is currently being developed and academic facilities priorities are being evaluated and vetted. As such, the only academic building priority reflected in this plan is the construction of the replacement for Surrine Hall, which was reflected in the University's 2014 CPIP. The new facility will serve as the new home of the College of Business and Behavioral Sciences (CBBS), which currently resides in 76 year-old Surrine Hall. The facility has had no significant renovation in 35 years and no longer provides adequate space for long-term growth or modern instructional delivery methods.

Investments identified as priorities were developed through conscious, data-driven, rational assessments of the University's utility and building infrastructure in relation to the demands of the families and students that Clemson serves. Clemson has identified projects that are essential to fulfilling its mission of providing a high quality, affordable education to the residents of South Carolina and has worked diligently to develop a responsible strategy for addressing the educational, infrastructure, housing, and student life needs of the University.

Clemson has identified several key capital planning focus areas:

1. Maintenance of Critical Utility and Infrastructure Systems (Electrical Distribution Systems Upgrades & Renovations)
2. Academic (Surrine Hall Replacement)
3. Student Services (Outdoor Fitness & Wellness Center)
4. Auxiliaries & Athletics (Football Operations Center, Child Care Center)

**1. What is the condition and adequacy of your existing facilities? Demand trends? What is the total amount of your agency's maintenance needs?**

The University's main campus encompasses approximately 500 acres, with more than 250 facilities. Clemson experienced a rapid building boom in the 1950's and 1960's (Martin Hall, Daniel Hall, Johnstone, Clemson House), and there are a number of buildings on campus that were built in the late 1920's to 1930's (Sirriner Hall, Fike). Despite the construction age of the University's facilities, through thoughtful, proactive management of maintenance, renovations and capital renewal, Clemson's E&G facilities have an average renovation age of 42 years.

Clemson University is focused on maintenance and the role that maintenance and renovations play in the proper stewardship and protection of capital assets. This includes preventative maintenance programs, targeted demolitions, repurposing of existing facilities, and new construction to protect, enhance and extend the life of capital assets. Clemson's maintenance and capital renewal investments result from conscious, data-driven decisions as part of a rational capital plan and resource allocation strategy.

For example, Clemson University participates in the South Carolina Commission on Higher Education building condition survey every three years. According to the SC CHE 2014 Building Condition Survey and taking into consideration inflation, changes in space and building conditions over the life of the 2020 Capital Plan, Clemson will need to invest nearly \$250M to properly protect facilities through annual maintenance.

The SC CHE survey relies on assessments conducted by trained, internal facilities staff members. The University also recognizes

the importance of objective, third-party assessments and benchmarking studies to ensure responsible, data-driven decisions. Therefore, Clemson has engaged with Sightlines, an industry leader in facility management analysis, to assess Clemson's facilities and investments in maintenance, renovations, and capital stewardship and renewal, as well as determine appropriate levels for long-term funding.

The most recent study by Sightlines identified that the University's E&G facilities are older, on average, than its peers, while Clemson's asset reinvestment backlog was less than land grant universities Sightlines observed and that this reflects the University's practice of maintaining and using its existing assets effectively; however, the demands of current instructional methods make many of the existing facilities inadequate for future academic goals. Other findings included:

- Approximately 38% of E&G facilities are over 50 years old.
- Nearly 28% are between 25 - 50 years old.
- Over two thirds of the University's E&G facilities have building and envelope life cycles due for replacement.

While the current facilities are adequately maintained, Clemson's facilities are presenting challenges to the University's educational programming and ability to compete with other top tier universities. The layout and design of classroom and lab facilities are an integral component of the learning process and, with 66% of the facilities over 25 years old, the ability to provide the space for these modern educational methods becomes more difficult.

In terms of new space, E&G space has increased approximately 7% since 2008, primarily attributable to the new Life Sciences Building replacing Long Hall, built in 1937, and the Lee Hall

(built 1958) renovation and annex. During that time period, the campus population increased 19%. Excluding these two critical replacements, E&G space increased only 2%.

Additionally, modern facilities are critical to recruitment and retention efforts. A study conducted by the APPA Leadership in Educational Facilities Management Institute demonstrated the impact of facilities on recruitment efforts. Over 66% of students noted that the overall quality of campus facilities was essential or very important to their decision (APPA.org, 2006). Moreover, the quality of campus facilities ranked higher than the technology capabilities, extracurricular opportunities, and the prestige of the university in impacting a student's decision to attend a particular university. In order to remain competitive with other top tier universities from an academic and student life standpoint and to ensure yield rates remain at consistent levels, providing quality campus facilities is crucial.

As a result of the Sightlines Auxiliary study, which identified several challenges given the University's housing stock, Clemson began construction on two critical housing projects this year – Douthit Hills Development and Core Campus. Over the past several years, Clemson has seen a decrease in total upperclassmen housing participation, largely due to a 28% increase in enrollment since 2004 with no increase in new housing bed inventory. The lack of growth in housing facilities has forced sophomores, juniors and seniors to live off-campus, as opposed to living in safer, affordable on-campus facilities proven to enhance the student experience and improve classroom performance. The Douthit Hills Development will address this critical housing issue, by adding 980 upperclassmen beds and 788 Bridge student beds to the housing inventory.

Also noted by Sightlines, the majority of Clemson's housing stock has exceeded the typical useful life. With an average

renovation age of 35 years, the current housing stock has become insufficient to provide competitive housing to students. The Core Campus project, currently under construction, will replace the Johnstone Hall facilities, built as temporary housing with 689 beds, and allow the University to provide housing consistent with top tier universities for a larger portion of the student body.

**2. What is your approach to maintaining existing facilities in acceptable condition? How are maintenance needs addressed? If your agency has an account dedicated to maintenance needs, what is the name of that account and what is its uncommitted balance?**

Clemson is committed to the stewardship and protection of its capital assets through responsible maintenance practices, as evidenced by Clemson's increasing investments in maintenance funding over the last several years. For example:

- Clemson spent more than \$29M in routine and preventative maintenance in FY 2014, which includes the maintenance of all E&G and Housing facilities, grounds, and equipment.
- Departmental funding, lab fee revenues and central campus allocations provide funding for University capital projects, which contribute to decreasing the overall maintenance backlog. Capital project spending in FY 2014 was nearly \$36M for E&G and Housing facilities, nearly double the investment levels in FY 2007.

To ensure that the University continues to address maintenance and capital stewardship and renewal needs, the University maintains dedicated resources on an annual basis. For example:

- **Maintenance, Repair, and Renovation (MR&R)** – Dedicated funding for projects supports the non-routine or

recurring maintenance and repair of E&G facilities and major equipment replacements associated with building systems. In FY 2011, dedicated allocations to MR&R were \$2.2M annually. The University has dramatically increased its dedicated allocations to the MR&R projects over the last several years. By the end of FY 2015, the University will have responsibly invested an additional \$5.7M in permanent allocations for MR&R, bringing the allocation to over \$7.9M annually.

- **Maintenance & Stewardship Fund** - Since 2007, Clemson has contributed funding annually to a dedicated fund for stewardship maintenance. Between FY 2009 and FY 2014, the University's average annual contribution was over \$10M. All balances are currently planned for stewardship maintenance projects.

Annual asset stewardship investments are determined through a number of mechanisms including semi-annual building envelope inspections, annual inspections of the electrical, HVAC, plumbing, fume hoods, boilers, fire codes, and elevators, quarterly containment inspections, space planning and utilization assessments, complete building condition assessments, customer surveys, and input from the University Facility Advisory Committee. These efforts allow Clemson to effectively prioritize projects and target potential issues before becoming significant improvement projects. Clemson has demonstrated the responsible management and stewardship of funds dedicated to maintenance efforts. According to a peer assessment by Sightlines, Clemson University's Operations & Maintenance Staff has fewer resources to support daily service than peers, but are covering more area than their counterparts at a higher level of customer satisfaction.

### 3. What are your facility replacement and addition needs?

Clemson is committed to protecting, enhancing, and extending the life of its capital assets through responsible asset stewardship and reinvestment policies. Clemson establishes investments in capital priorities based on a thorough analysis of data and metrics, which takes into consideration programmatic and competitive priorities, long-range infrastructure requirements, and critical maintenance needs. As part of these assessments, Clemson conducts extensive cost benefit analyses on each facility to determine whether renovating, repurposing, maintaining at existing levels or demolishing the facility is the most fiscally responsible course of action.

While Clemson has dedicated itself to the maintenance and responsible stewardship of its facilities, a number of the facilities have outlived their useful lives and purposes. Clemson's 2020Forward plan will continue to provide the opportunity to address critical maintenance and infrastructure issues and provide enhanced educational, housing, and student life facilities.

As it relates specifically to projects included in the CPIP, highlights include:

- **Replacement of Critical Utility Infrastructure and Aging Facilities**
  - Electrical Distribution System Upgrade & Renovation will upgrade portions of the 50-and 60-year-old distribution system to improve system reliability and enhance life safety issues.
- **Replacement and Enhancement of Academic Spaces for Improved Learning**
  - The over 75-year-old Surrine Hall will be replaced with a new building, thus providing space for growth, a centralized location for instruction and research, and an environment that will support

greater collaboration and interactions with industry partners.

- Clemson is currently undergoing an extensive capital planning process with its new leadership team, which will result in additional academic and other capital project priorities that have not been fully vetted by the University or its Board of Trustees at the time of the 2015 CPIP submission. The University plans to bring year 1 projects identified through this process for interim approval.

- **Replacement of Campus Recreational Space for Students**

- Clemson University does not have the capacity to support the recreational, fitness and wellness needs of its growing student population with its current infrastructure. The Outdoor Fitness & Wellness Center project will replace and enhance recreational spaces and wooden facilities that are at the end of their useful lives.

#### **4. What is the theme of your five-year CPIP? How does it address these questions?**

Consistent with the University's 2020 Road map and the 2020 Forward plan, currently under development, the theme of this five-year CPIP is focused on maintaining and replacing end-of-life utility infrastructure, providing student services facilities that reflect a top-tier institution and meet student expectations, and strategically renovating, replacing, repurposing and constructing other facilities that support the University's core mission of teaching, research and public service.

As stated previously, Clemson's facilities are presenting challenges to the University's educational programming and ability to compete with

other top-quality universities. The University has identified capital investments and strategies through a conscious, data-driven, rational assessment of the University's utility and building infrastructure in relation to the demands of the families and students that Clemson serves. Clemson has identified projects that are essential to fulfilling its mission of providing a high quality, affordable education to the residents of South Carolina and has worked diligently to develop a responsible strategy for addressing the educational, infrastructure, housing, and student life needs of the University. All projects in this plan have been reviewed internally for suitability of scope, cost and funding strategy within the University's strategic framework.