

Executive Summary

Clemson University – Tennis Center Construction

In conjunction with its 2011 Athletics Master Plan, Clemson is requesting to move forward with the construction of a new Tennis Complex. After evaluating the project scope and preliminary budget, this project initially appeared on the 2014-15 CPIP submission. Clemson's Board of Trustees approved Phase I in April 2016, and as a result, this project was submitted as a Year 1 priority on the 2016-17 CPIP submission. In response to CHE concerns, this project was moved to Year 2 in June 2016. Subsequently, Clemson submitted this project in the interim in August 2016. Phase II approval was received by Clemson's Board of Trustees in February 2017, and the request was successively submitted to CHE.

As an auxiliary project, the construction and associated debt will be supported with non-student revenues. Debt service will be paid with net revenues from Athletics and IPTAY. Specifically, IPTAY has committed to funding \$6.5 million over the life of issuance. When combined with Athletics net revenues, which have averaged \$9.7m over the last 10 years, the estimated maximum debt service of \$9.9 million scheduled to be paid in FY2018 is adequately covered. Maintenance of athletic facilities is supported by the Athletic Operations Fund, which revenue sources include tickets, conference distributions, sponsorships, merchandise, and contributions from IPTAY.

During our campus site visit in March 2017, we had the opportunity to view the current tennis facility. Staff noted that building conditions showed signs of aging and that ADA access to the facility was limited. In addition, differential settlement of the building foundation, roof leaks, and inaccessible restroom facilities were discussed and observed. Although new construction will occur, existing spectator stands, court lighting, and competition courts will remain available for use.

The overall risk assessment for Clemson's financial health is low. Review of historical and projected revenues and expenses for the athletic enterprise exhibited healthy net revenues available to support this project. The athletic debt capacity is sufficient to absorb the projected debt service. The primary concern for this project is the lack of up-front equity contribution.

Capital Project Risk Analysis

Institution: Clemson University

Capital Project: Tennis Center Construction

Date Received: February 9, 2017

Risk: Maintenance

How does the institution budget for annual routine maintenance?

Clemson maintains adequate reserves that are dedicated to the upkeep of current and future capital assets and facilities. Maintenance funds for this facility are provided through annual operations, utilizing the Athletic Improvement Fund. This fund was established to pay for improvements to athletic facilities, which may include new facilities, facility renovations, ongoing maintenance, and renewal needs. As of 12/31/16, the Athletic Improvement Fund had an uncommitted balance of \$3,839,190.

Maintenance Risk Assessment: Low Risk

Risk: Source of Funds

Readily available and traceable?

The source of funds for the Tennis Center Construction is 100% Athletic Revenue Bonds. Currently, Clemson is utilizing \$130.6 million, 65%, of the statutorily allowed \$200m. This bond issuance will utilize an additional 6.5% of the University's bond capacity. In total, approximately 71.5% of the allowed debt capacity will be used. Clemson is targeting a 40-50% aggregate cash funding for the remaining projects in its current Athletics master plan. Clemson has strategically saved up its debt capacity for projects that do not generate fundraising dollars such as the Tennis Center. Athletic projects that are able to generate fundraising will provide funding to support an equity investment. These fundraising supported projects generally will produce higher returns that safeguard the equity investment.

Effect on student affordability?

Student access and affordability will not be affected as a result of this project. The project relies 100% on external revenue sources, through net revenues from Athletics and IPTAY. Tuition and fees will not be affected in order to service the debt, as no fee is assessed to students for Athletic operations or attendance to events.

Source of Funds Risk Assessment: Moderate Risk

Risk: Financial Stability

Based on our review of the financial indicators, there appears to be no current nor projected financial stability concerns. Clemson has favorable trends related to increasing Revenue consistent to increasing Expenses, at both the Institutional and Athletic levels. When combined with IPTAY, Clemson's athletic financial position is sufficient to cover operations and service existing debt. Clemson continues to demonstrate its dedication to maintaining a successful athletic enterprise in the way it strategically manages its athletics debt and cash position.

Financial Stability Risk Assessment: Low Risk

Risk: Debt Capacity

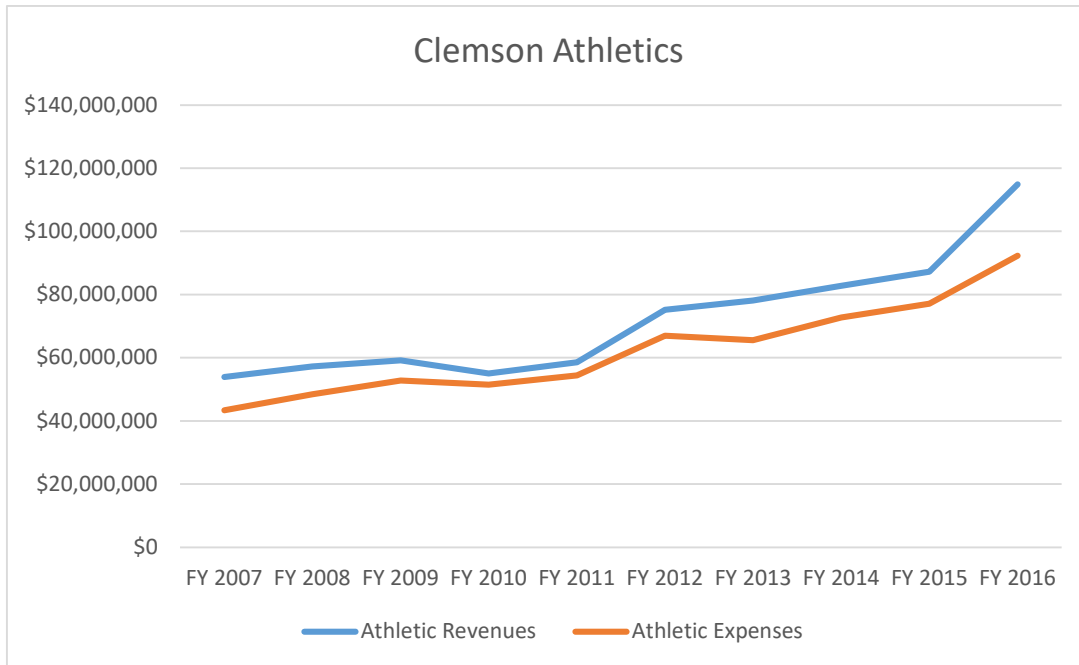
Clemson is statutorily restricted to \$200 million in athletic facility debt. Currently, the University has Athletic debt outstanding in the amount of \$130.6 million. The additional issuance will increase the balance to \$143.1m. The debt service associated with the Tennis project is approximately \$700,000 annually.

Debt Capacity Risk Assessment: Low Risk

Additional Financial Indicators Relevant to Clemson Tennis Construction Project

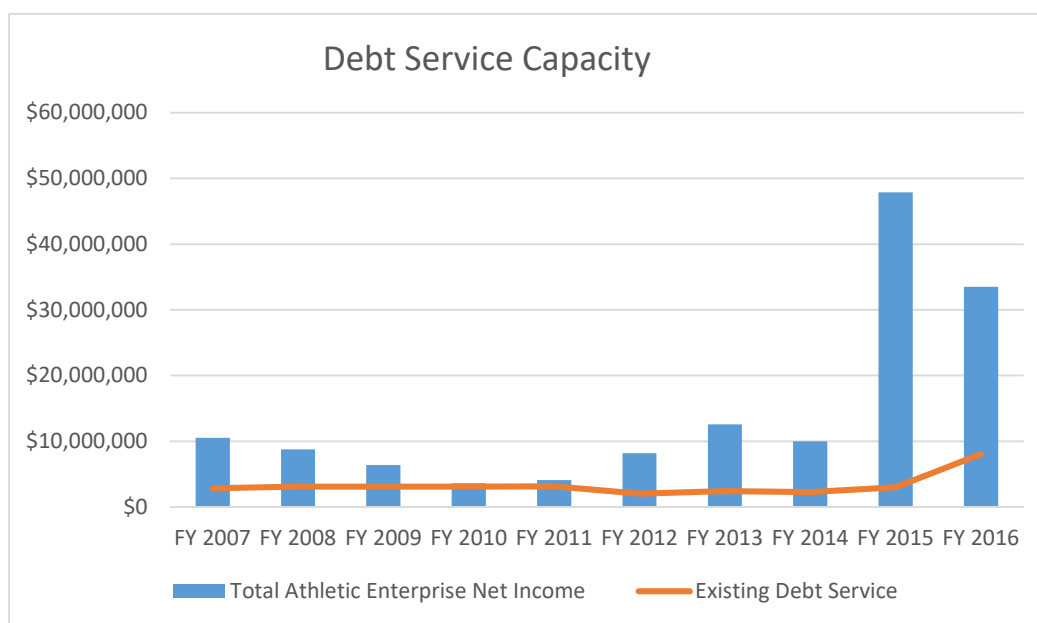
10 Year Total Revenues and Expense Trend

Clemson has continually managed its Athletics portfolio over the last ten years to have a positive change in its financial position. Athletic Net Revenues have averaged \$9,688,400 over the past ten years, and are projected to average \$10,555,167 in the next five years.



Ratio of Debt to Debt Capacity

The debt service associated with the Tennis Center Construction will not exceed \$700,000 annually. At the end of FY16, Clemson had approximately \$33.6m in Athletic Enterprise Net Income available to service its debt, which had an existing debt service of \$8.1m. Athletic debt capacity will be marginally affected by the additional bond issuance.



Schedule of Estimated Future Athletic Enterprise Net Income and Debt Service

	FY 2017 (est)	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Athletic Revenues	\$107,349,000	\$108,645,000	\$114,277,000	\$118,280,000	\$120,546,000	\$126,677,000
Athletic Expenses	\$97,337,000	\$98,520,000	\$103,461,000	\$107,488,000	\$109,749,000	\$115,888,000
Athletics Net Revenue	\$10,012,000	\$10,125,000	\$10,816,000	\$10,792,000	\$10,797,000	\$10,789,000
IPTAY Net Income	\$13,928,200	\$8,812,000	\$7,585,400	\$6,461,900	\$5,958,900	\$3,832,400
Total Athletic Enterprise Net Income	\$23,940,200	\$18,937,000	\$18,401,400	\$17,253,900	\$16,755,900	\$14,621,400
Existing Debt Service	\$9,199,160	\$9,199,460	\$9,198,110	\$9,199,610	\$9,199,460	\$9,195,890
Coverage (x)	2.6	2.1	2.0	1.9	1.8	1.6
Pro-Forma Debt Service (with Tennis)	N/A	\$9,897,634	\$9,893,235	\$9,895,973	\$9,896,444	\$9,892,741
Coverage (x)	N/A	1.9	1.9	1.7	1.7	1.5

CLEMSON UNIVERSITY

PROJECT NAME: Tennis Center Construction
REQUESTED ACTION: Increase Budget
REQUESTED ACTION AMOUNT: \$12,500,000
INITIAL CHE APPROVAL DATE: N/A

<u>Source of Funds</u>	<u>Phase I (Pre-Design)</u>	<u>Phase II (Construction)</u>	<u>Total Proposed Budget</u>
Athletic Improvement Fund	\$312,500	(\$312,500)	\$0
Athletic Revenue Bonds	\$0	\$12,500,000	\$12,500,000
Total	\$312,500	\$12,187,500	\$12,500,000

DESCRIPTION:

The University requests approval to establish the construction budget for the men's and women's varsity tennis teams. The new center will retain and continue to utilize existing tennis facilities, include outdoor competition courts and a 700-seat permanent stadium. The new approximately 60,000 sf. ft. facility will include construction of two additional outside courts, six new indoor courts, a clubhouse containing locker rooms, a training room equipment rooms, a players' lounge, laundry, coaches' offices, ticket office, and public restrooms.

Current tennis facilities were constructed in the 1970s, with the addition of the indoor facility in 1987. Renovating the existing facility was considered, however it was determined during planning that a new facility would be more cost effective, due to siting, ventilation, and seismic issues. The new facility will also be ADA compliant, and provide for better pedestrian and vehicular access.

This project was included in the institution's FY 2016-17 CPIP.

MAINTENANCE:

Once complete, this facility will be added to the University's overall maintenance plan system.

ANNUAL OPERATING COSTS/SAVINGS:

The project is expected to incur additional operating costs for utilities and maintenance. The current operating budget of the facility is \$93,000, and costs are expected to increase \$36,000 as a result of additional HVAC costs associated with increased square footage. Athletic Operating Funds will continue to provide the funding.

FOR DEPARTMENT USE ONLY

CHE _____
 JBRC _____
 SFAA _____
 JBRC Staff _____
 ADMIN Staff _____
 A-1 Form Mailed _____
 SPIRS Date _____
 Summary _____

(For Department Use Only)

SUMMARY NUMBER

FORM NUMBER

PERMANENT IMPROVEMENT PROJECT REQUEST

1. AGENCY

Cod H12 Name Clemson University
 Contact Person John McEntire Phone 864-656-1238

2. PROJECT

Project # 9932 Name Tennis Center Construction
 Facility # _____ Facility Name Tennis Center

County Code	39
New/Revised Budget	\$12,500,000.00

Project Type	Construct Additional Facility
Facility Type	Athletic

3. CIP PROJECT APPROVAL FOR CURRENT FISCAL

CIP priority number 5 of 6 for FY 2016-17.

4. PROJECT ACTION PROPOSED (Indicate all requested actions by checking the appropriate boxes.)

Request for Construction	<input type="checkbox"/>	Request for Renovation	<input type="checkbox"/>	Request for Replacement	<input type="checkbox"/>
Request for Addition	<input type="checkbox"/>	Request for Relocation	<input type="checkbox"/>	Request for Repair	<input type="checkbox"/>
Request for Demolition	<input checked="" type="checkbox"/>	Request for Rehabilitation	<input type="checkbox"/>	Request for Reconstruction	<input type="checkbox"/>

5. PROJECT DESCRIPTION AND JUSTIFICATION

(Explain and justify the project or revision, including what it is, why it is needed, and any alternatives considered. Attach supporting documentation/maps to fully convey the need for the request.)

This request is to establish the Phase II construction budget to construct a new state-of-the-art tennis center for the men's and women's varsity tennis teams. The new center will retain and continue to utilize existing tennis facilities, include outdoor competition courts and a 700-seat permanent stadium. The new approximately 60,000 square foot tennis center will include a new six-court indoor tennis facility, a clubhouse containing locker rooms, a training room, equipment rooms, a players' lounge, laundry and coaches' offices, a ticket office and public restroom building, two new outdoor courts and related sitework.

The existing tennis center and indoor practice facilities were constructed between 1987 and 1993 and are not sufficient for today's needs. The existing indoor facility lacks two needed courts for practice and competition in inclement weather. There is currently no designated tennis parking or suitable vehicular or disabled access to the site, which is located along Highway 93. Existing office and support facilities are too small for today's needs. The new facilities will enhance recruiting efforts, improve student athlete playing experiences, improve opportunities for NCAA regionals and other championships, and provide for better pedestrian circulation and vehicular access. Renovating the existing indoor court building was considered but demolishing it and constructing a new facility was determined to be a more feasible alternative, due to siting, ventilation, seismic and other issues.

6. OPERATING COSTS IMPLICATIONS

Attach Form A-49 if any additional operating costs or savings will result from this request. This includes costs to be absorbed with current funding.

7. ESTIMATED PROJECT SCHEDULE AND EXPENDITURES

Estimated Start Date: Sep-16 Estimated Completion Date: June 2018
 Estimated expenditures: Thru current FY: \$ 500,000.00 After current FY: \$ 12,000,000.00

8. ESTIMATES OF NEW/REVISED PROJECT COSTS

PROJECT #	9932
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- 1. _____ Land Purchase ----> Land: _____ Acres
 - 2. _____ Building Purchase ----> Floor Space: _____ Gross Square Feet
 - 3. \$1,110,000.00 Professional Services Fees
 - 4. _____ Equipment and/or Materials ----> Information Technology \$ _____
 - 5. _____ Site Development
 - 6. \$10,200,000.00 New Construction ----> Floor Space: 60,000 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. \$550,000.00 Other: PP&E, Project Admin, inspections, etc.
 - 18. \$640,000.00 Contingency
- \$ 12,500,000.00 TOTAL PROJECT BUDGET

ENVIRONMENTAL HAZARDS	
Identify all types of significant environmental hazards (including asbestos, PCB's, etc.) present in the project and the financial impact they will have on the project.	
Type:	_____
Cost Breakdown	
Design Services	\$ _____
Monitoring	\$ _____
Abate/Remed	\$ _____
Total Costs	\$ _____

9. PROPOSED SOURCE OF FUNDING

Source	Previously Approved Amount	Increase/Decrease	Original/Revised Budget	Transferred to/from Proj. #	Rev. Object Code	Treasurer's ID Number	Rev. Sub-Fund	Exp. Sub-Fund
(0) Capital Improvement Bonds, Oro					8115		3043	3043
(1) Dept Capital Improvement Bonds Oro					8115		3143	3143
(2) Institution Bonds								3235
(3) Revenue Bonds		\$ 12,500,000.00	\$ 12,500,000.00		8212	38800100		3393
(4) Excess Debt Service Type								3497
(5) Capital Reserve Fund					8895		3603	3603
(6) Appropriated State Program Source -					8895	68800100	1001	3600
(7) Federal						78800100		5787
(8) Athletic						88800100		3807
(9) Other (Specify)								
Athletic Improvement	\$ 312,500.00	\$ (312,500.00)			7201	98800100	4243	3907
TOTAL BUDGET	\$ 312,500.00	\$ 12,187,500.00	\$ 12,500,000.00					

10. SUBMITTED BY:

Brett A. Dalton
Signature of Authorized Official and Title

Date

Brett A. Dalton, Executive Vice President for Finance and Operations

11. APPROVED BY:

(For Department Use Only)

Authorized Signature and Title

Date

**ADDITIONAL ANNUAL OPERATING COSTS/SAVINGS
RESULTING FROM PERMANENT IMPROVEMENT PROJECT**

1. AGENCY
Code H12 Name Clemson University

2. PROJECT
Project # 9932 Name Tennis Center Construction

3. ADDITIONAL ANNUAL OPERATING COSTS/SAVINGS. (Check whether reporting costs or savings.)

XX COSTS SAVINGS NO CHANGE

4.

TOTAL ADDITIONAL OPERATING COSTS/SAVINGS				
Projected Financing Sources				
(1)	(2)	(3)	(4)	(5)
Fiscal Year	General Funds	Federal	Other	Total
1) 2017-18	\$	\$	\$36,000.00	\$36,000.00
2) 2018-19	\$	\$	\$36,720.00	\$36,720.00
3) 2019-20	\$	\$	\$37,454.00	\$37,454.00

5. If "Other" sources are reported in Column 4 above, itemize and specify what the other sources are (revenues, fees, etc.).

Athletic Operating Funds

6. Will the additional costs be absorbed into your existing budget? XX YES NO
If no, how will additional funds be provided?

7. Itemize below the cost factors that contribute to the total costs or savings reported above in Column 5 for the first fiscal year.

<u>COST FACTORS</u>	<u>AMOUNT</u>
1. <u>Utilities</u>	<u>26,000.00</u>
2. <u>Maintenance</u>	<u>10,000.00</u>
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
TOTAL	<u>\$36,000.00</u>

8. If personal services costs or savings are reported in 7 above, please indicate the number of additional positions required or positions saved. _____

9. Submitted By: *Bruce A. Dalton* _____
Signature of Authorized Official and Title Date

**PERMANENT IMPROVEMENT PROJECT INFORMATION FORMAT FOR
PHASE II CONSTRUCTION BUDGET**

**Tennis Center Construction
February 9, 2017**

1. What is the total projected cost of the project and what is it based on? Please attach a summary of the costs prepared during the A&E pre-design phase to support the total cost. \$12,500,000.00
2. What is/are the source(s) of funds for the construction? If any private or federal funds are included, please attach a letter guaranteeing the availability of the funds.

Athletic Facilities Revenue Bonds

3. What is your agency/institution's definition of each fund source to be used for construction? (If any type of fee makes up a portion of the source, what is the fee called, what is the fee amount, and when it was put in place. If there is a statutory authority authorizing the use of the funds for capital projects, please cite the code section.)

Athletic Facilities Revenue Bonds are long-term debt instruments issued by the State Treasurer's Office in the name of the University and are pledged to be repaid with a combination of Athletic net revenues, ticket surcharges, and private gift funds.

4. What is the current uncommitted balance of funds for each source listed in 3 above?

There is currently no bond balance for Athletic Facilities Revenue Bonds. The bond resolution will be submitted for approval by the Joint Bond Review Committee and State Fiscal Accountability Authority concurrently with the Phase II construction budget approval in Spring 2017.

5. If institution or revenue bonds are included as a source, when were the bonds issued? If not issued yet, when is the bond resolution expected to be brought for State Fiscal Accountability Authority approval?

The bond resolution will be submitted for approval by the Joint Bond Review Committee and State Fiscal Accountability Authority concurrently with Phase II construction budget approval in Spring 2017.

6. If a student fee is used to fund debt service, what is the current amount of the fee annually or by semester? Please specify which. N/A

7. Will the use of any funds for construction require an increase in any student fee or tuition? If so, please explain in detail.

No student tuition or fee increase is required for construction of this facility. Existing tuition and fees, including the FY 16-17 increase, are sufficient to cover any costs associated with this project, although the identified funding sources are not generated from tuition and fees.

8. Will the project be LEED certified for energy savings and conservation and if so, at what level will it be certified? For projects requiring or using LEED certification, please attach the required cost benefit analysis and a checklist of items to be used to achieve LEED points or a description of the energy measures to achieve LEED.

The facility will be certified to Two Green Globes Certification. The cost benefit analysis and Green Globe checklist are attached.

9. What energy savings/conservation measures will be implemented within the project if the project will not be LEED certified? For projects that do not require/use LEED, please provide a paragraph on energy savings measures to be implemented as part of the project. If there are no energy savings measures included, please state that and explain why.

N/A – The project will be certified to Two Green Globes Certification.

10. What is the projected date (month and year) for execution of the construction contract? June 2017

11. What is the projected date (month and year) for completion of construction? January 2018

12. What program(s) are to be included in the constructed or renovated space?

The men's and women's tennis programs will use the new tennis center when it is completed.

13. What is the total square footage of the building to be renovated or constructed?

A new approximately 60,000 square foot tennis center will be constructed as part of this project. The construction will include a new six-court indoor tennis facility, a clubhouse containing locker rooms, a training room, equipment rooms, a players' lounge, laundry and coaches' offices, a ticket office and public restroom building, along with two new outdoor courts and related sitework.

14. If a portion of the building is to be renovated, what is the square footage of the portion that will be included in the renovation? N/A

15. What is the current age of the building or building systems to be renovated? N/A

16. If any new space is being added to the facility, please provide demand/usage data to support the need.

The primary space expansion within the project is the indoor practice courts portion of the tennis complex. The current facility houses four indoor courts. In order to operate efficient and effective NCAA varsity tennis matches and postseason events, six indoor courts are needed. This allows for all six singles matches to be conducted concurrently, instead of staggered, reducing total match times by approximately 33%. Similarly, the expansion to six courts provides 50% more court opportunity for effective practice scheduling for both the men's and women's tennis programs.

17. What are the estimated numbers of students, faculty, staff and/or clients that are expected to use the space affected by the project or the entire building? (Answer for as many as are applicable.)

The primary users of the new facilities will remain the NCAA varsity men's and women's tennis programs. Each program has approximately three coaches, three support staff members and ten student-athletes, totaling approximately 32 individuals who will use the facility. Additionally and as available, Clemson Campus Recreation will host intramurals, club team, and other recreation activities at the facility, as well as community-centered events such as summer tennis camps and City

of Clemson-sponsored tennis tournaments. Further, Clemson anticipates a total of 5,000 spectators

per year for men's and women's tennis matches will also use the facilities.

18. If the construction cost increased significantly from the internal estimate (30% or more), what factors caused the cost to increase? N/A
19. If the contingency is more than 10%, please explain why. N/A
20. If funds are being transferred from another project, what is the current status of the project from which funds are being transferred? N/A
21. Has the project been included in a previous year's CPIP? If so, what was the last year the project was included and for which year, 1-5? 2016 CPIP, Year One
22. What are the economic impacts of the project, including job creation and retention? If there are none, please explain.

The economic impact of this project will be substantial. Approximately \$12.5 million in construction will mean a large number of jobs for architects, engineers, builders, and tradesmen during the course of the project.

23. How will your agency/institution address and fund maintenance of this facility construction/renovation?

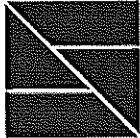
Maintenance of this facility will be provided through annual operations, utilizing the existing Athletic Improvement Fund.

24. If your agency/institution has a deferred maintenance account, what is the name of the account and what is its current uncommitted balance?

As required by bond covenants, an Athletic Improvement Fund has been established and is funded with Athletics Operations fund to maintain and renovate facilities constructed with Athletic Facilities Revenue Bonds. As of 12/31/16, the Athletic Improvement Fund had an uncommitted balance of \$3,839,190.

25. If how maintenance will be addressed and funded for this facility construction/renovation has not been determined yet, what steps are in place to begin to address how your agency/institution will fund maintenance to this and other agency/institution facilities?

N/A – see response to question 23.



SHERMAN
CONSTRUCTION

CLEMSON UNIVERSITY

EXECUTIVE SUMMARY

Schematic Design Budget Review

SD Documents

Project Information

Client Clemson University

Project Tennis Center Construction
Clemson, SC
State Project H12-9932-JM

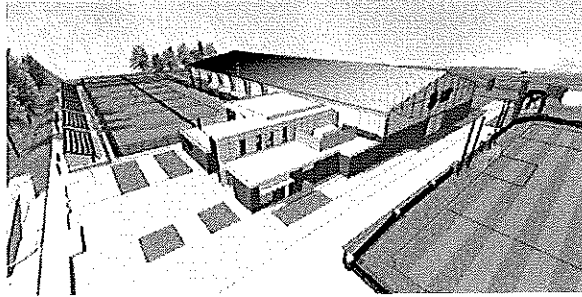
Architect LS3P

Estimator Andy Sherman

Square Feet 60,700

Project Duration 8 Months

Date February 3, 2017



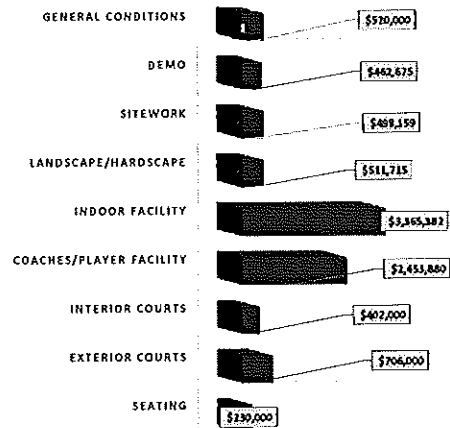
Building Type New Construction

Construction Area 60,700 SF

Project Costs Summary

TOTAL INVESTMENT	\$ 10,177,265
COST PER (Unit)	\$ 168

01	General Conditions	\$	520,000
02	Demo	\$	462,675
03	Sitework	\$	498,159
04	Landscape/Hardscape	\$	511,715
05	Indoor Facility	\$	3,365,382
06	Coaches/Player Facility	\$	2,453,880
07	Interior Courts	\$	402,000
08	Exterior Courts	\$	706,000
09	Seating	\$	230,000



SUBTOTAL	\$ 9,149,811
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Addons

Surety Bond	\$	112,991
Insurance	\$	56,496
Pre-Construction	\$	66,708
Taxes & Ins On Labor	\$	77,349
Sales Tax		Incl. in Adv.
Fee	\$	446,315
Contingency	\$	267,594
Permits, Licenses, Etc.		Not Required

TOTAL	\$ 10,177,264.59
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Sustainability Cost Benefit Analysis

Certification Level Threshold: 2 Green Globes
 Building Area (Gross Square Footage) 60,000

Administrative & Equipment Cost Summary

Certification Costs (Two Green Globes Target)			\$83,500
Registration Fees		\$1,500	
Certification Review Fees	\$/gsf	\$10,000	
Design		\$0	
Construction		\$10,000	
LEED Professional Administration Costs		\$35,000	
Fundamental & Enhanced Commissioning Costs		\$22,000	
Energy Modeling		\$15,000	
Increased Equipment & Construction Costs			\$97,904
Total Premium Costs for Certification			\$181,404

Operational Cost Summary

	Annual \$/GSF	Annual Costs	Life Cycle Costs (30 yrs)
Baseline Annual Building Operation Costs			
Building Systems Utility Costs	2.00	\$120,000	\$3,600,000
Potable Water	0.50	\$30,000	\$900,000
Building Maintenance and Repair	1.60	\$96,000	\$2,880,000
Total Costs			\$7,380,000
Certified Building Estimated Operational Costs			
Building Systems Utility Costs (10% reduction)	1.80	\$108,000	\$3,240,000
Potable Water (30% reduction)	0.35	\$21,000	\$630,000
Building Maintenance and Repair (10% reduction)	1.44	\$86,400	\$2,592,000
Total Costs			\$6,462,000

Payback Analysis

Operational Cost Savings	\$918,000
Total Premium Costs for Certification	-\$181,404
Net Savings	\$736,596

Increased equipment & construction costs include:
 High Efficiency HVAC Equipment & Control Systems
 LED/High Efficiency Lighting & Control Systems; Daylighting
 High Efficiency Glazing and Building Envelope
 Solar Heat Gain Mitigation
 Sustainable Material Selections & Low VOC Products

GBI Project Checklist for Green Globes for New Construction



Globes Rating Scale: Four > 85
 Three 70 - 85
 Two 55 - 70
 One 34 - 55

Date: 8-Feb-17
 Project Name: CU Indoor Tennis Facility

WATER		Maximum Points: 110	Y	N	?	N/A
4.1	Water Consumption	42	42			
4.2	Cooling Towers	9				9
4.3	Boilers and Water Heaters	4	4			
4.4	Water Intensive Applications	18				
4.4.1	Commercial Food Service Equipment	6				6
4.4.2	Laboratory and Medical Equipment	5				5
4.4.3	Laundry Equipment	4	4			
4.4.4	Special Water Features	3				3
4.5	Water Treatment	3	3			
4.6	Alternate Sources of Water	5	5			
4.7	Metering	11	5	5	1	
4.8	Irrigation	18	18			

EMISSIONS		Maximum Points: 50	Y	N	?	N/A
6.1	Heating	18	18			
6.2	Cooling	29				
6.2.1	Use of New or Existing Cooling Equipment (informational only)	0				
6.2.2	Ozone-Depleting Potential	10	10			
6.2.3	Global Warming Potential	10	10			
6.2.4	Leak Detection	9				9
6.3	Janitorial Equipment	3	3	0	0	0

MATERIALS & RESOURCES		Maximum Points: 125	Y	N	?	N/A
5.1	Building Assembly (Core & Shell including Envelope)	33	33	0	0	0
5.2	Interior Fit-Out (Including Finishes and Furnishings)	16	16	0	0	0
5.3	Reuse of Existing Structures	26				
5.3.1	Facades	6		6		
5.3.2	Structural Systems	6		6		
5.3.3	Non-Structural Elements	14		14		
5.4	Waste	9				
5.4.1	Construction Waste	7	7			
5.4.2	Operational Waste	2	2			
5.5	Building Service Life Plan	7	7			
5.6	Resource Conservation	6				
5.6.1	Minimized Use of Raw Materials	3	1	2		
5.6.2	Multi-Functional Assemblies	1	1			
5.6.3	Deconstruction and Disassembly	2		2		
5.7	Building Envelope - Roofing/Opening	10				
5.7.1	Roofing Membrane Assemblies and Systems	3	3			
5.7.2	Flashings	3	3			
5.7.3	Roof and Wall Openings	4	4			
5.8	Envelope - Foundation, Waterproofing	6				
5.8.1	Foundation Systems	4	4			
5.8.2	Below Grade Wall Slabs and Above Grade Horizontal	2	2			
5.9	Envelope - Cladding	5				
5.9.1	Exterior Wall Cladding Systems	3	3			
5.9.2	Rainscreen Wall Cladding	2	1	1		
5.1	Envelope - Barriers	7				
5.1.1	Air Barriers	4	4			
5.1.2	Vapor Retarders	3	3			
		366	140	0	32	

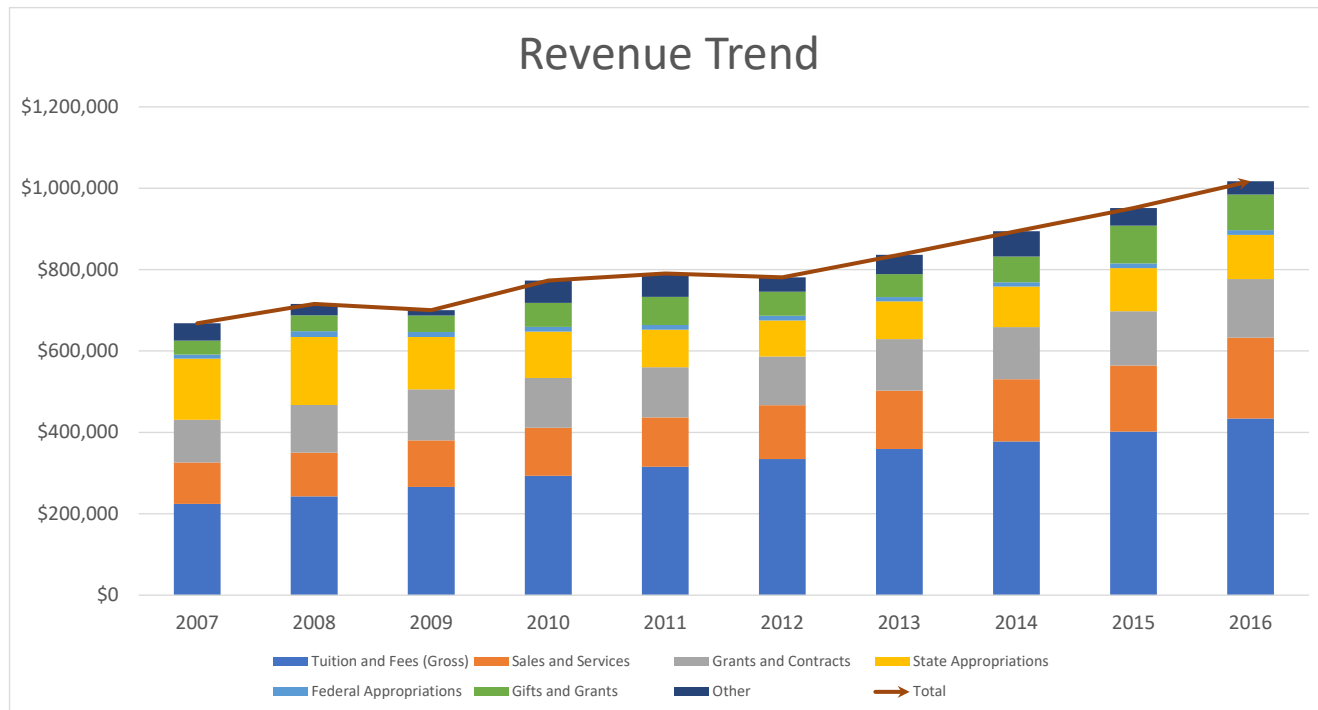
INDOOR ENVIRONMENT		Maximum Points: 160	Y	N	?	N/A
7.1	Ventilation	37				
7.1.1	Ventilation Air Quantity	11	11			
7.1.2	Air Exchange	8	8			
7.1.3	Ventilation Intakes and Exhausts	8	8			
7.1.4	CO2 Sensing and Ventilation Control Equipment	5	5			
7.1.5	Air Handling Equipment	5	3	2		
7.2	Source Control and Measurement of Indoor Pollutants	46				
7.2.1	Volatile Organic Compounds	10	10			
7.2.2	Leakage, Condensation and Humidity	8	8			
7.2.3	Access for HVAC Maintenance	4	8			
7.2.4	Carbon Monoxide Monitoring	4	8			
7.2.5	Wet Cooling Towers	2				2
7.2.6	Domestic Hot Water Systems	2	2			
7.2.7	Humidification and Dehumidification Systems	3	3			
7.2.8	Pest and Contamination Control	3	2	1		
7.2.9	Other Indoor Pollutants (Tobacco, Radon)	8	4	2	2	
7.2.10	Ventilation and Physical Isolation for Specialized Activities	2	2			
7.3	Lighting Design and Systems	30				
7.3.1	Daylighting	17	13	4		
7.3.2	Lighting Design	13	11	2		
7.4	Thermal Comfort	18				
7.4.1	Thermal Comfort Strategies	12	6			6
7.4.2	Thermal Comfort Design	6	6			
7.5	Acoustic Comfort	29				
7.5.1	Acoustic Comfort Design	18	13	3	2	
7.5.2	Mechanical, Plumbing, and Electrical	11	9		2	
Sub-Total		465	295	81	0	79
Previous Column Sub-total		535	366	140	0	32
Total		1000	661	221	0	111
TOTAL PTS AVAILABLE (EXCLUDES N/A)		889				
% SCORE (TOTAL PTS/TOTAL AVAILABLE PTS)		74%				
Globes Rating		3				

Clemson University

Revenue Analytics

All Dollar Amounts are in Thousand's Unless otherwise indicated

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tuition and Fees (Gross)	\$224,319	\$242,659	\$266,199	\$293,619	\$315,701	\$334,504	\$359,496	\$377,843	\$401,913	\$434,408
Sales and Services	\$101,653	\$107,636	\$114,291	\$117,913	\$121,317	\$132,306	\$143,425	\$153,026	\$162,648	\$198,245
Grants and Contracts	\$105,139	\$117,001	\$125,604	\$122,160	\$123,394	\$119,746	\$126,085	\$128,082	\$132,997	\$144,084
State Appropriations	\$150,335	\$167,224	\$128,279	\$114,120	\$91,917	\$88,780	\$92,784	\$99,591	\$106,345	\$108,812
Federal Appropriations	\$9,667	\$14,186	\$12,317	\$11,269	\$11,744	\$11,507	\$10,948	\$10,566	\$11,338	\$11,632
Gifts and Grants	\$34,413	\$39,020	\$40,293	\$59,473	\$68,797	\$59,127	\$56,403	\$62,951	\$92,828	\$87,225
Other	\$42,548	\$27,819	\$13,360	\$54,537	\$57,886	\$34,876	\$47,499	\$62,229	\$43,418	\$32,808
Total	\$668,074	\$715,545	\$700,343	\$773,091	\$790,756	\$780,845	\$836,641	\$894,289	\$951,487	\$1,017,214
		7.1%	-2.1%	10.4%	2.3%	-1.3%	7.1%	6.9%	6.4%	6.9%



Revenue has been trending favorably with an average increase of 4.9% over the past ten years and a total increase of 52.3% over the same period. As expected, Tuition revenue is the primary revenue source averaging 40% of total revenues over the past ten years.

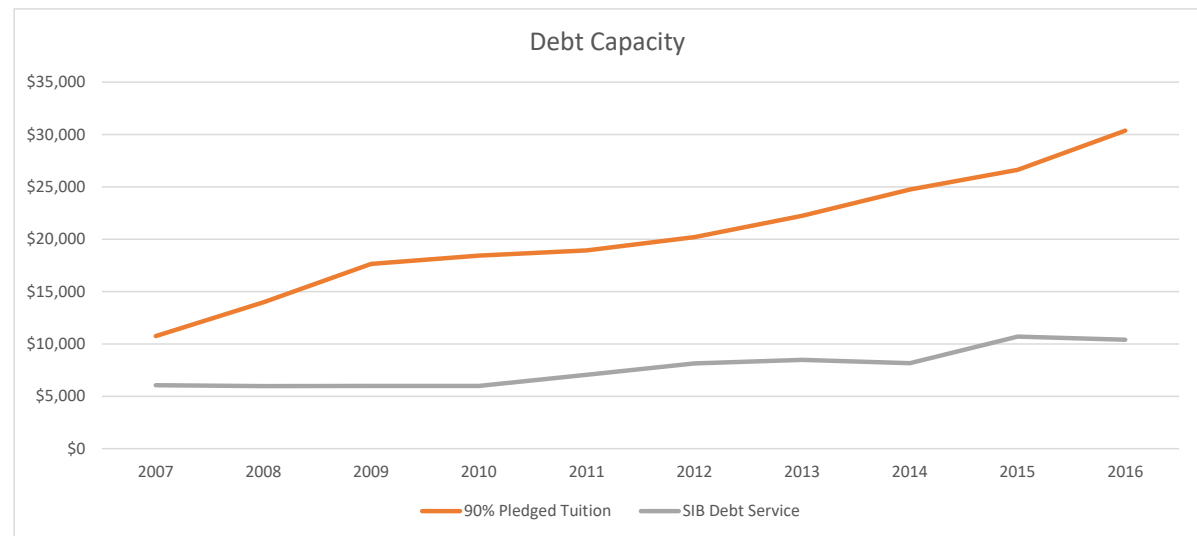
Clemson University
Debt Capacity Analysis
Excess Debt Service

All Dollar Amounts are in Thousand's Unless otherwise indicated

90% Pledged Tuition
 SIB Debt Service
 Available for Debt Service

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
90% Pledged Tuition	\$10,747	\$13,981	\$17,646	\$18,444	\$18,925	\$20,196	\$22,233	\$24,738	\$26,621	\$30,366
SIB Debt Service	\$6,056	\$5,973	\$5,981	\$5,980	\$7,056	\$8,128	\$8,478	\$8,164	\$10,699	\$10,397
Available for Debt Service	\$4,691	\$8,008	\$11,665	\$12,464	\$11,869	\$12,068	\$13,755	\$16,574	\$15,922	\$19,969

The debt service associated with the Business and Behavioral Sciences Building will not exceed \$5.7 million. The annual available debt service of \$20 million as of June 30, 2016 is more than adequate for Clemson to take on this debt with minimal risk of exceeding the maximum debt service or 90% of pledged tuition.



Clemson University
Enrollment Analytics
 FTE (Based on Credit Hours)

Undergraduate FTE

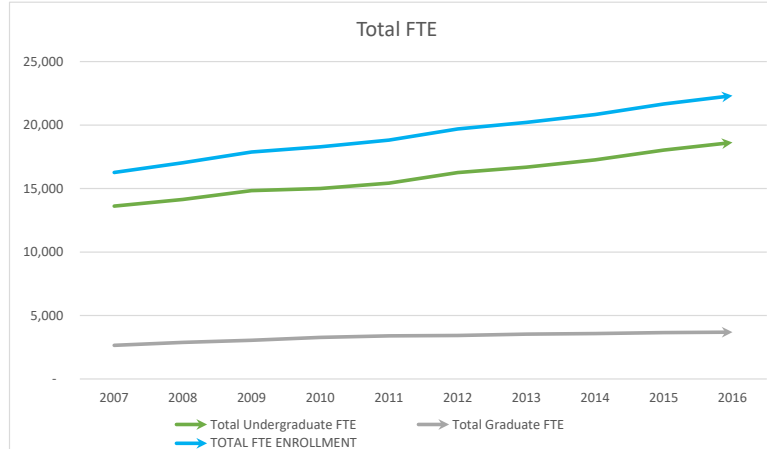
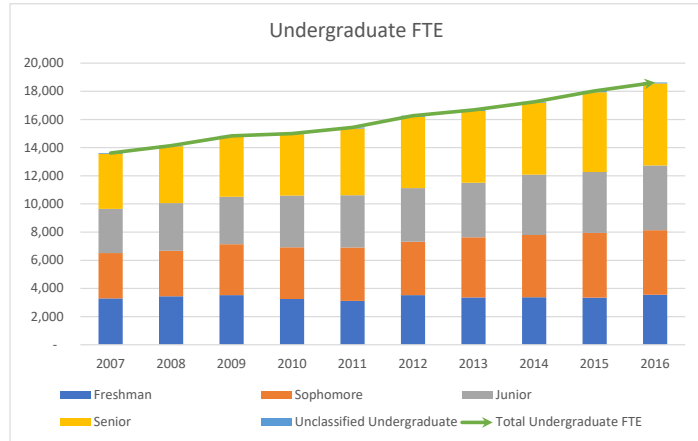
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Freshman	3,290	3,446	3,522	3,249	3,120	3,525	3,355	3,377	3,350	3,549
Sophomore	3,215	3,236	3,611	3,671	3,788	3,786	4,269	4,413	4,589	4,587
Junior	3,139	3,372	3,383	3,666	3,713	3,806	3,882	4,282	4,331	4,591
Senior	3,922	4,041	4,268	4,378	4,737	5,063	5,106	5,121	5,657	5,826
Unclassified Undergraduate	49	48	52	38	71	83	67	62	94	76
Total Undergraduate FTE	13,616	14,143	14,836	15,001	15,429	16,264	16,679	17,255	18,022	18,628

Graduate FTE

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Graduate	2,642	2,878	3,037	3,277	3,380	3,412	3,519	3,558	3,627	3,670
Specialist	8	6	3	3	13	16	17	18	19	18
Total Graduate FTE	2,650	2,884	3,040	3,280	3,392	3,428	3,537	3,576	3,647	3,687

TOTAL FTE ENROLLMENT

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	16,266	17,027	17,876	18,281	18,821	19,692	20,216	20,831	21,668	22,316



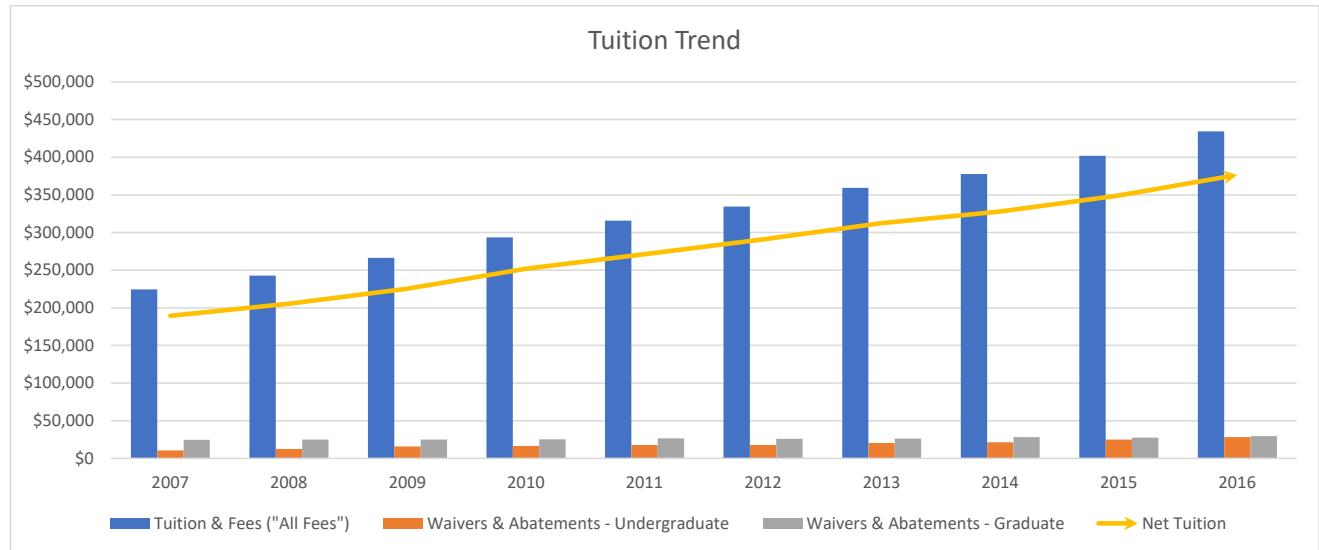
Clemson undergraduate enrollment growth has been steady averaging 3.6% over the ten year period. The freshman class has consistently been the smallest class in the same period due to much of the incoming students having AP credits that qualify them to be in the sophomore class upon arrival. The senior class is consistently the largest as this includes all students who have been at Clemson for four or more years. Due to a focus on internships, several students exceed the four year period. Clemson graduate enrollment has averaged 3.8% growth over the ten year period. In the past three years, enrollment has flattened to a three year average of 1.4%. This is driven by facility capacity and program demand.

Clemson University

Tuition Analytics

All Dollar Amounts are in Thousand's Unless otherwise indicated

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tuition & Fees ("All Fees")	\$224,319	\$242,659	\$266,199	\$293,619	\$315,701	\$334,504	\$359,496	\$377,843	\$401,913	\$434,408
Waivers & Abatements - Undergraduate	10,459	12,412	15,671	16,448	17,675	17,719	20,551	21,484	25,035	28,373
Waivers & Abatements - Graduate	24,503	24,972	25,032	25,399	26,612	26,034	26,409	28,337	27,727	29,510
Net Tuition	189,357	205,275	225,496	251,772	271,414	290,751	312,536	328,022	349,151	376,525
		8.4%	9.9%	11.7%	7.8%	7.1%	7.5%	5.0%	6.4%	7.8%



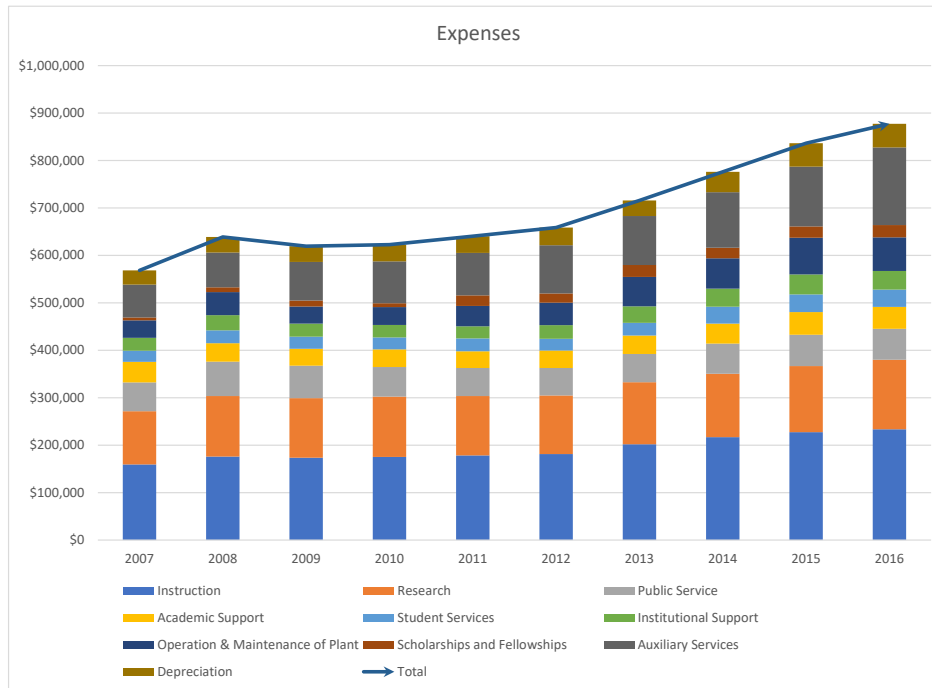
Net tuition has increased over ten years at an average of 8% while waivers and abatements have increased for under by 17.1% for undergraduates and 2% for graduate students in the same period.

Clemson University
Expense Analytics

All Dollar Amounts are in Thousand's Unless otherwise indicated

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Instruction	\$159,318	\$176,166	\$173,423	\$175,249	\$178,644	\$181,146	\$201,731	\$216,977	\$227,483	\$233,589
Research	\$112,141	\$127,428	\$125,623	\$126,972	\$124,837	\$123,594	\$130,787	\$133,563	\$139,399	\$146,516
Public Service	\$60,951	\$72,648	\$68,508	\$62,390	\$59,083	\$57,889	\$59,837	\$63,542	\$65,814	\$65,362
Academic Support	\$43,104	\$38,647	\$35,776	\$37,182	\$35,321	\$36,715	\$38,926	\$42,231	\$47,633	\$46,018
Student Services	\$23,608	\$27,150	\$25,189	\$25,316	\$27,282	\$24,685	\$26,694	\$35,578	\$37,345	\$36,540
Institutional Support	\$27,039	\$31,951	\$27,843	\$26,389	\$25,490	\$28,925	\$34,640	\$38,019	\$42,388	\$39,267
Operation & Maintenance of Plant	\$36,811	\$48,826	\$35,869	\$37,435	\$42,905	\$47,505	\$61,942	\$64,116	\$77,157	\$70,664
Scholarships and Fellowships	\$6,165	\$10,006	\$12,488	\$8,124	\$22,143	\$19,503	\$25,179	\$22,115	\$23,773	\$26,006
Auxiliary Services	\$69,282	\$73,218	\$81,304	\$88,329	\$89,548	\$101,375	\$103,420	\$116,856	\$126,150	\$163,498
Depreciation	\$29,946	\$32,697	\$33,364	\$35,164	\$35,009	\$37,163	\$32,715	\$42,974	\$49,316	\$49,872
Total	\$568,365	\$638,737	\$619,387	\$622,549	\$640,262	\$658,500	\$715,870	\$775,971	\$836,457	\$877,333

12.4% -3.0% 0.5% 2.8% 2.8% 8.7% 8.4% 7.8% 4.9%



Expenses have grown at a average rate of 5% per year and in total 54.4% over a ten year period. Instruction cost has grown in total 47%, while operation maintenance has grown 92% and scholarship & fellowshp expense has grown 322% over this same period.

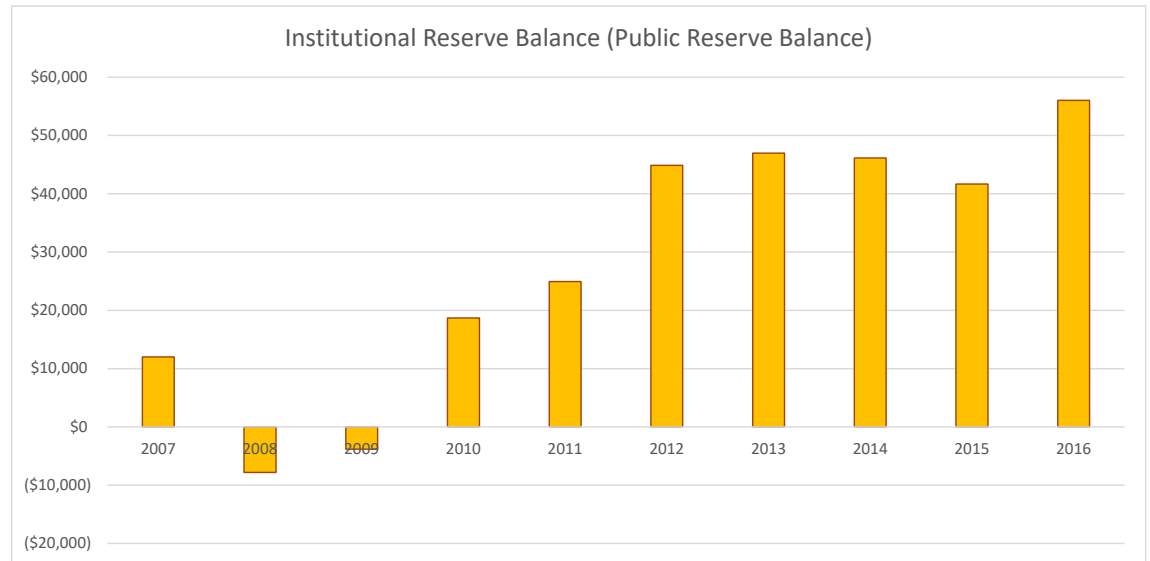
Clemson University

Institutional E&G Reserve Balance (Public Reserve Balance)

All Dollar Amounts are in Thousand's Unless otherwise indicated

Net position designated for the ClemsonForward strategic plan; replacement of critical IT infrastructure; police, fire, and EMS equipment; building access control systems; replacement and upgrading lab, classroom, learning technology; This also reflects necessary operating balances to fund continuing equipment purchases and renovations necessary to meet ongoing accreditation requirements and for self-supporting E&G initiatives fulfill our mission by providing continuing education, short courses and seminars to business and industry. For context, this is equal to approximately 4 weeks in actual University operating expenses

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
\$12,003	(\$7,798)	(\$3,816)	\$18,687	\$24,935	\$44,874	\$46,958	\$46,151	\$41,670	\$56,019
	-165.0%	-51.1%	589.7%	33.4%	80.0%	4.6%	-1.7%	-9.7%	34.4%



Overall the Change in Net Position has been positive each year except two years. In 2008, the negative change was primarily strategic related planned investments due to faculty startups, renovations and significant IT upgrades. In 2009, the financial crisis resulted in a sudden and significant reduction in state appropriations.

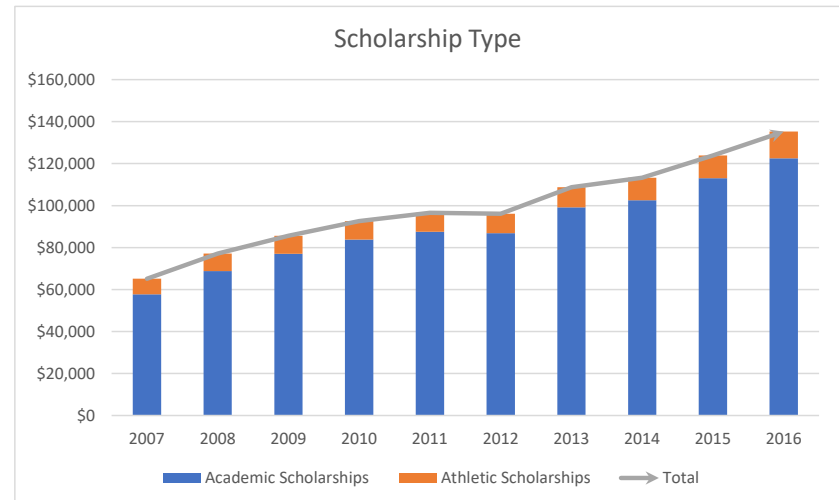
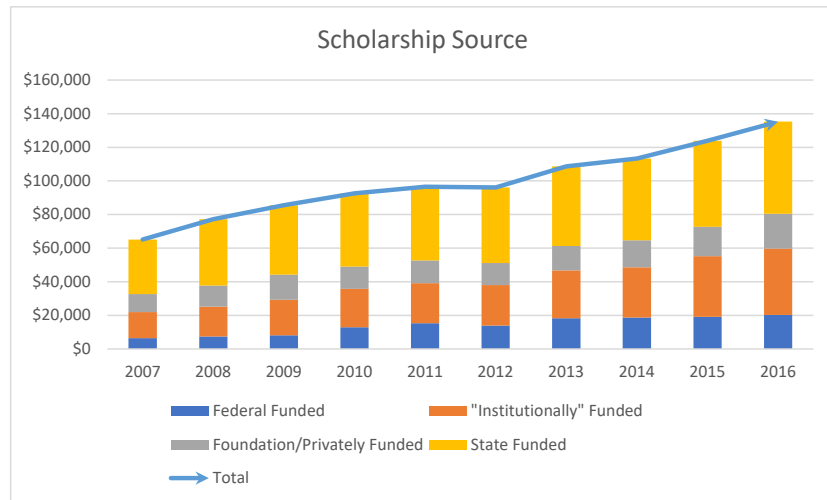
Clemson University

Institutional and Foundation Scholarship Data

All Dollar Amounts are in Thousand's Unless otherwise indicated

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Federal Funded	\$6,456	\$7,386	\$8,195	\$12,910	\$15,332	\$13,943	\$18,330	\$18,677	\$19,076	\$20,196
"Institutionally" Funded	\$15,523	\$17,847	\$21,081	\$22,841	\$23,866	\$24,033	\$28,457	\$29,959	\$36,165	\$39,484
Foundation/Privately Funded	\$10,752	\$12,575	\$14,958	\$13,277	\$13,462	\$13,142	\$14,448	\$16,032	\$17,455	\$20,756
State Funded	\$32,410	\$39,380	\$41,325	\$43,595	\$43,876	\$44,937	\$47,467	\$48,631	\$51,160	\$54,792
Total	\$65,141	\$77,188	\$85,559	\$92,623	\$96,537	\$96,055	\$108,702	\$113,299	\$123,856	\$135,227

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Academic Scholarships	\$57,751	\$68,796	\$77,077	\$83,776	\$87,546	\$86,809	\$99,142	\$102,591	\$112,991	\$122,482
Athletic Scholarships	\$7,389	\$8,392	\$8,481	\$8,847	\$8,991	\$9,246	\$9,560	\$10,708	\$10,865	\$12,745
Total	\$65,141	\$77,188	\$85,559	\$92,623	\$96,537	\$96,055	\$108,702	\$113,299	\$123,856	\$135,227



Clemson University

Faculty/Staff to Students

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
FTE Faculty & Staff	4,646	4,749	4,593	4,205	4,052	4,321	4,485	4,741	4,896	5,057
FTE Students (Based on credit hours)	16,266	17,027	17,876	18,281	18,821	19,692	20,216	20,831	21,668	22,316
Ratio	1:3.5	1:3.5	1:4	1:4.5	1:4.5	1:4.5	1:4.5	1:4.5	1:4.5	1:4.5

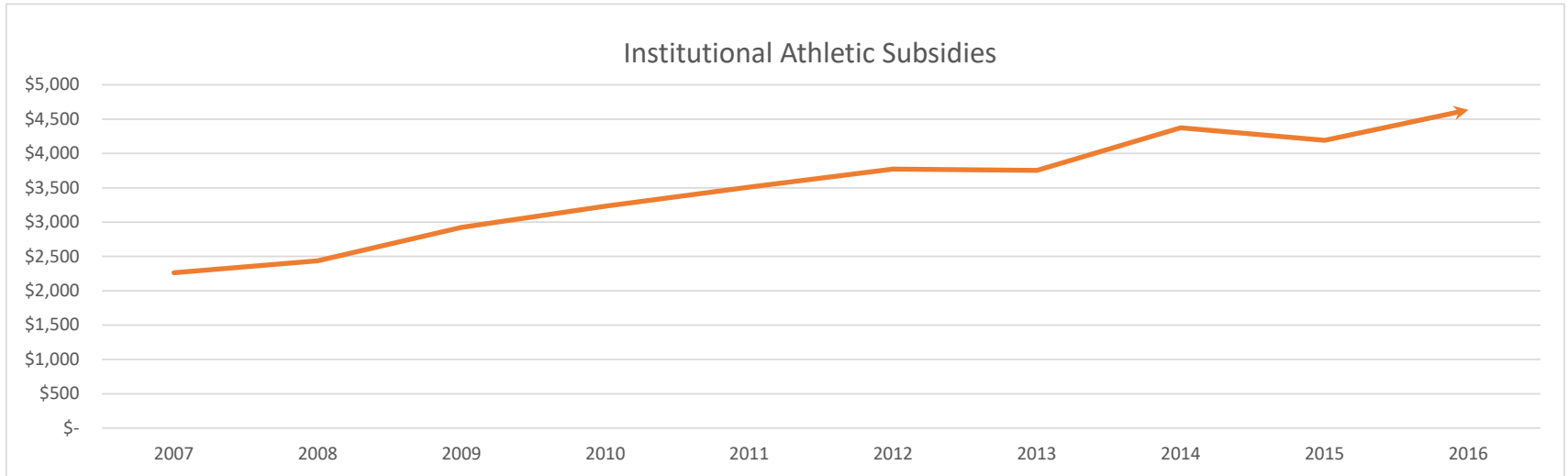
Overall, the ratio has been consistent and reasonable based on the size and growth of the faculty, staff and students.

Clemson University

Institutional Subsidies to Athletics - Per NCAA Agreed Upon Procedures

All Dollar Amounts are in Thousand's Unless otherwise indicated

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
\$ 2,262	\$ 2,435	\$ 2,924	\$ 3,234	\$ 3,512	\$ 3,771	\$ 3,753	\$ 4,376	\$ 4,191	\$ 4,634



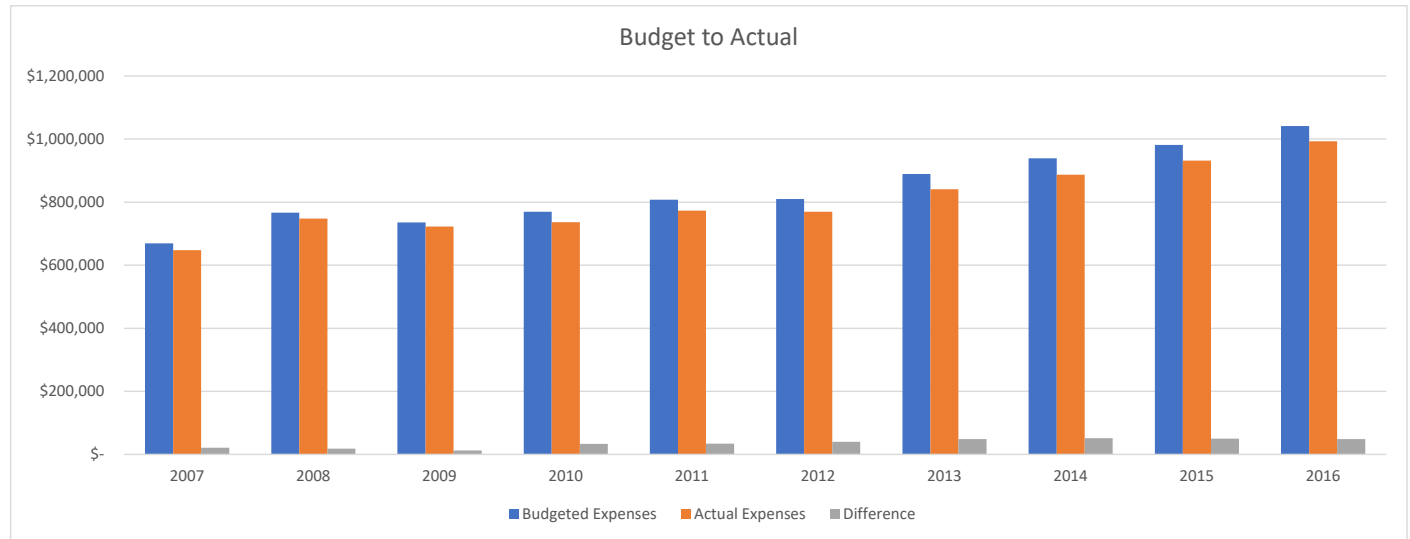
Athletic subsidies are non-cash tuition waivers for out-of-state students on athletic scholarships.

Clemson University

Variance between Approved Budget and Closing Budget

All Dollar Amounts are in Thousand's Unless otherwise indicated

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Budgeted Expenses	\$ 669,157	\$ 766,435	\$ 735,364	\$ 769,865	\$ 807,516	\$ 809,748	\$ 889,384	\$ 938,844	\$ 981,715	\$ 1,041,618
Actual Expenses	647,632	748,253	722,553	736,270	773,021	769,894	840,842	887,239	931,452	993,261
Difference	\$ 21,525	\$ 18,182	\$ 12,811	\$ 33,595	\$ 34,495	\$ 39,854	\$ 48,542	\$ 51,605	\$ 50,263	\$ 48,357
	3.2%	2.4%	1.7%	4.4%	4.3%	4.9%	5.5%	5.5%	5.1%	4.6%

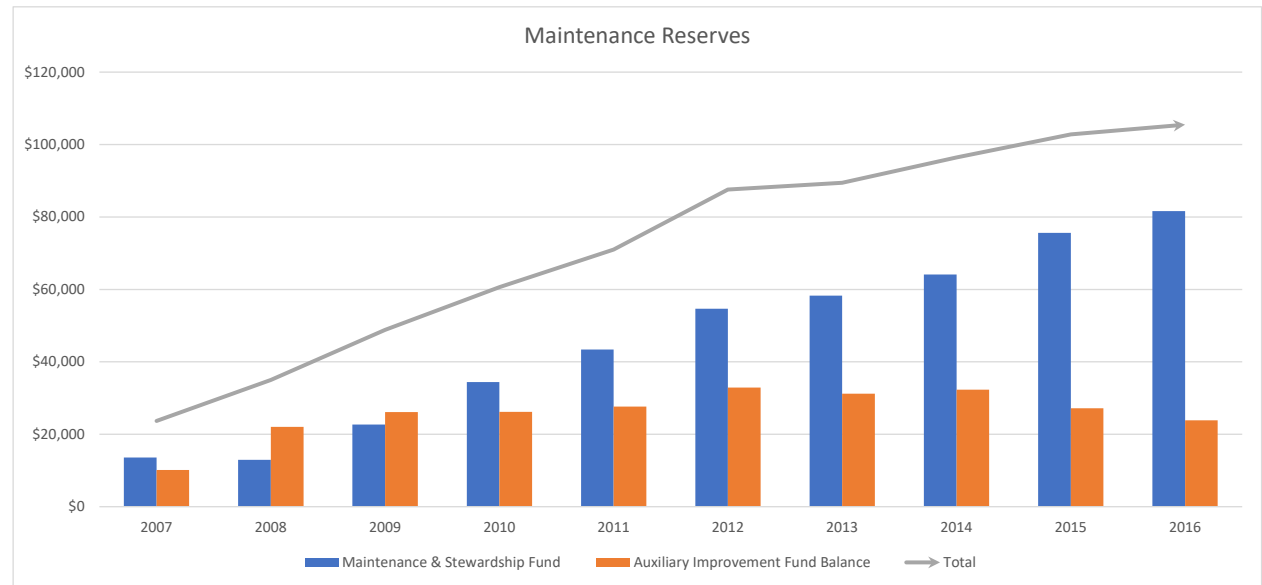


Clemson University

Maintenance Reserve Account and Institutional Capital Reserve Account

All Dollar Amounts are in Thousand's Unless otherwise indicated

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Maintenance & Stewardship Fund	\$13,554	\$12,955	\$22,674	\$34,423	\$43,375	\$54,635	\$58,261	\$64,136	\$75,638	\$81,631
Auxiliary Improvement Fund Balance	\$10,124	\$22,046	\$26,146	\$26,197	\$27,643	\$32,911	\$31,187	\$32,304	\$27,149	\$23,858
Total	\$23,678	\$35,001	\$48,820	\$60,620	\$71,018	\$87,546	\$89,448	\$96,439	\$102,786	\$105,489



Maintenance & Stewardship Fund balance is used for ongoing and future maintenance of existing E&G assets. Auxiliary Improvement Fund balance is used for ongoing and future maintenance of existing Auxiliary assets. Neither of these funds are currently used to fund capital projects.