

Virginia Tech Board of Visitors Meeting

March 23-24, 2014

Information Session

Minutes

- A. **Minutes:** Academic Affairs Committee
- B. **Resolution:** Approval of the Bachelor of Science Degree in Microbiology
- C. **Resolution:** Approval of the Bachelor of Science Degree in Nanoscience
- D. **Resolution:** Approval of the Bachelor of Science Degree in Computational Modeling and Data Analytics
- E. **Minutes:** Buildings and Grounds Committee
- F. **Resolution:** Approval of the Demolition of University Building 433J
- G. **Resolution:** Approval of the Smithfield Plantation Historic Easement
- H. **Minutes:** Finance and Audit Committee
- I. **Resolution:** Approval of the Year-to-Date Financial Performance Report (July 1, 2013 - December 31, 2013)
- J. **Resolution:** Approval of 2014-15 Compensation for Graduate Assistants
- K. **Resolution:** Approval of the Capital Project for Constructing the Marching Virginians Practice Facility
- L. **Resolution:** Approval of the Capital Project for Planning the Health Center Improvements
- M. **Resolution:** Approval of the Capital Project for Planning the South Recreation Field Replacement
- N. **Resolution:** Approval of the Capital Project for the New Athletic Field Housing Financing Plan
- O. **Minutes:** Research Committee
- P. **Resolution:** Approval of the Appointment to the Virginia Coal and Energy Research and Development Advisory Board
- Q. **Minutes:** Student Affairs and Athletics Committee
- R. **Report:** Research and Development Disclosures
- S. **Resolution:** Naming of a University Facility
- T. **Resolutions:** Approval of Emeritus Requests (5)
- U. **Resolutions:** Approval of Endowed Chairs, Professorships, or Fellowships (6)
- V. **Resolution:** Approval of Change in Name of the Commonwealth Professorships to Rolls Royce Commonwealth Professorships
- W. **Resolutions:** Faculty Research Leave Requests (76)
- X. **Resolution:** Ratification of the Personnel Changes Report

Y: [Resolution](#): Appreciation for President Charles W. Steger

Z. [Reports](#): Constituent Reports

Board of Visitors Information Session

**Sunday, March 23, 2014
2:15 - 3:45 p.m.**

**The Inn—Latham Ballrooms D, E, F
Virginia Tech Campus**

Presentation on Budget

- Mr. M. Dwight Shelton, Jr., Vice President for Finance and Chief Financial Officer

Constituent Reports

- Mr. Erica Wood, Undergraduate Student Representative to the Board
- Mr. Nick Warrington, Graduate Student Representative to the Board
- Ms. Sue Teel, President of Staff Senate
- Dr. Joe Merola, President of Faculty Senate



Update on Financial Environment & Outlook

M. Dwight Shelton, Jr.
VP for Finance and Chief Financial Officer

March 23, 2014

Financial Planning Environment

Planning Environment

**Higher Education Opportunity Act
Long Range Plan**

6-Year Plan – State Submission

State Budget Process

Analysis of Cost Drivers

Need for NGF

Six-Year Plan

- **Approved by Board in September 2013**
- **Responded to State “asks” with academic strategies and resource outlook**
 - \$58.8 million, including General Fund and nongeneral fund needs, to fund academic strategies and other cost increases in 2014-15
 - \$33.8 million in new academic initiatives
 - \$25.0 million incremental operating support
- **Process is precursor to State budget process**
- **Provides the Governor with opportunities to invest state resources in common goals.**

Resource Development Process

FALL

- Planning
- Work with Administration on funding priorities
- Enrollment and Pricing Study

WINTER

- Advocate for General Fund support
- Work on legislative issues

WINTER/SPRING

- Understand economic environment and major cost drivers
- Analyze impact of General Assembly actions including incremental resources and NGF assessments on university revenue
- Present recommendations to Board regarding NGF revenue options to address funding of new costs and initiatives

SPRING

University Budget Structure

2013-14 Operating Budget

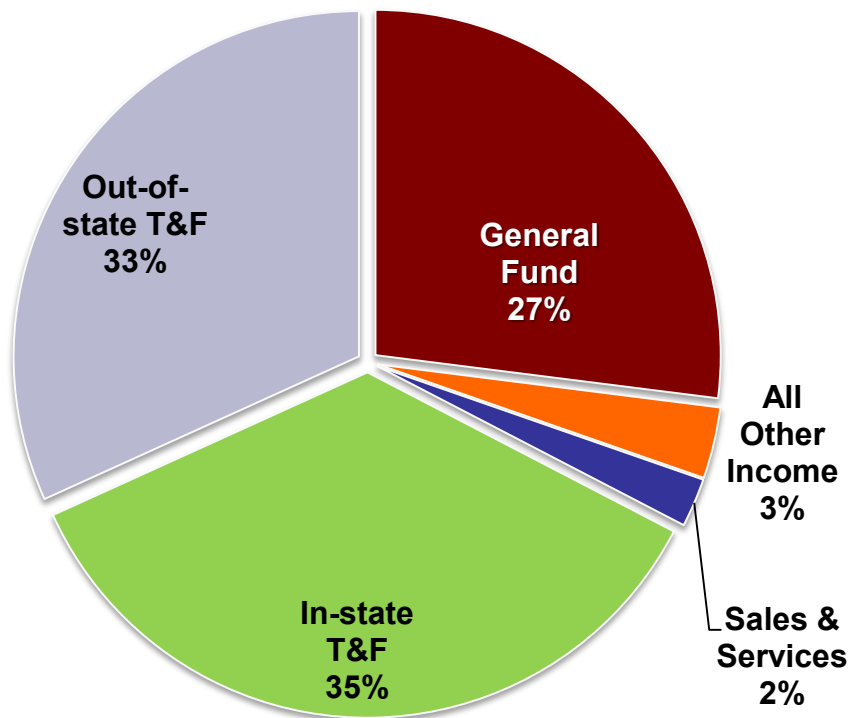
(\$ in Millions)

	2012-13 Adjusted Budget	2013-14 Original Budget	Change	
			\$	%
208 Educational & General	\$539.6	\$563.3	\$23.7	4.4%
229 Educational & General*	80.6	80.0	(0.6)	-0.7%
Subtotal E&G	620.2	643.3	23.1	3.7%
Auxiliary Enterprises	276.0	286.6	10.6	3.8%
Sponsored Programs**	290.2	329.7	39.5	13.6%
Student Financial Aid	19.0	19.7	0.7	3.5%
Other	5.9	6.3	0.4	7.0%
Total	\$1,211.3	\$1,285.6	\$74.3	6.1%

* 229 E&G decrease due to one-time items in FY13

**Includes Grants & Contracts, Enterprise Fund, and Eminent Scholars private support

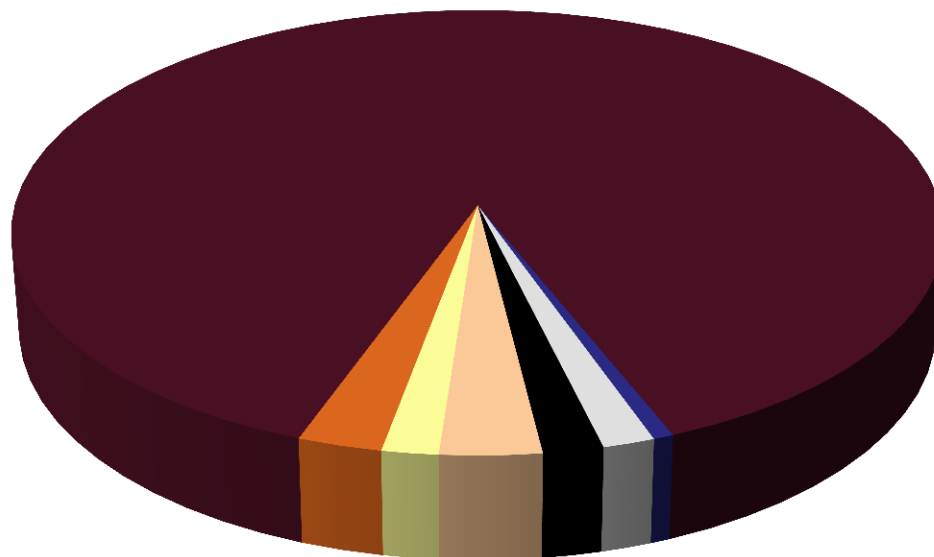
University Division Revenue Sources Educational & General Program 2013-14



Components	\$ Millions	%
General Fund	\$149.3	27%
In-state T&F	197.9	35%
Out-of-state T&F	184.9	33%
Sales & Services	13.1	2%
All Other Income	18.1	3%
Total	\$563.3	100%

NGF E&G Funding Sources, University Division 2013-14

(\$ in millions)



■ Tuition

\$365.7 88.4%

■ E&G fee

2.6 0.6%

■ Program Fees

6.8 1.6%

■ Miscellaneous Fees

7.6 1.8%

■ Sales & Services

13.1 3.2%

■ Other Revenues

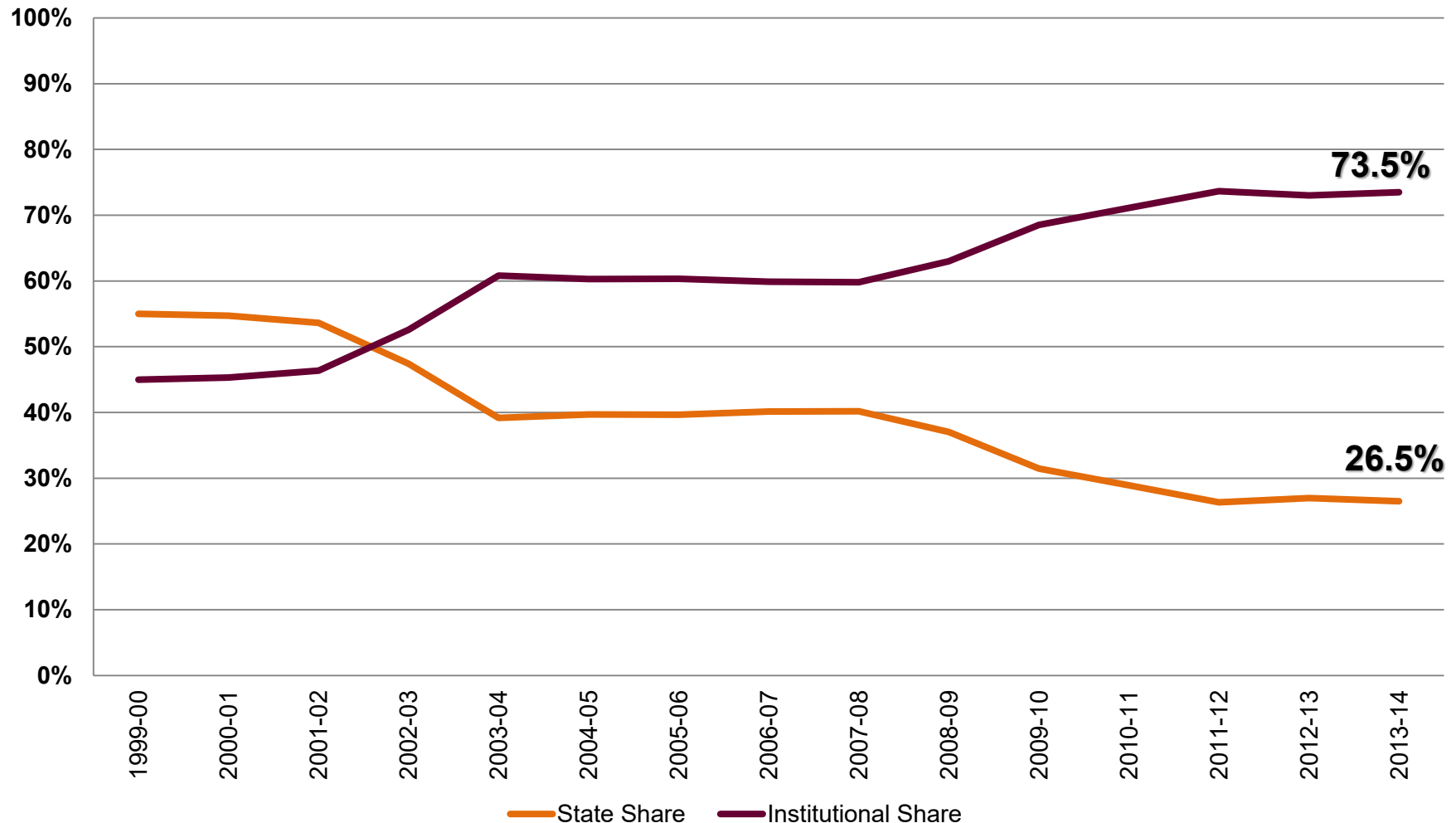
7.3 1.8%

■ Continuing Education

10.9 2.6%

Virginia Tech Fund Split

University Division Fund Split



State Funding Environment

General Fund Resources

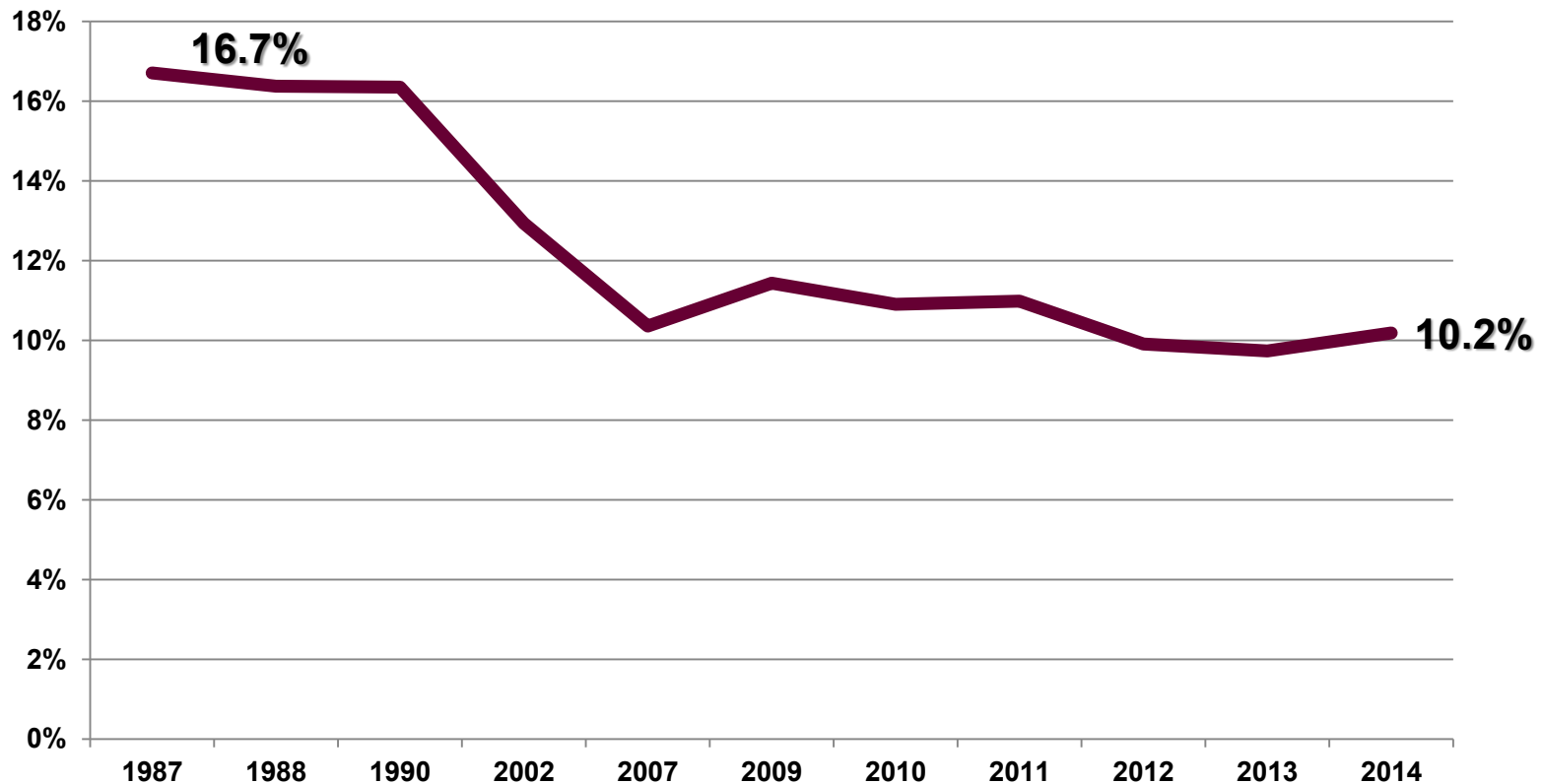
- **State taxpayer support**
- **Appropriated to Virginia Tech**
 - Resident students
 - Specific items (e.g. research, student financial aid)
- **General Fund support per student has declined faster than nongeneral fund resources have replaced it, on an inflation adjusted basis.**
- **For 2014-16, the State allowed institutional requests for specific initiatives that support state goals as described in the six-year plan.**

Nongeneral Fund Resources

- **Revenues generated by university from various operating activities**
- **Major Educational & General Categories:**
 - Tuition & E&G Fees
 - Miscellaneous charges and fees
 - Lab fees, application fees
 - Sales & Services
 - Veterinary Hospital, administrative fees, etc.

Level of State Support for Higher Education

**General Fund for Higher Education Operations
as share of total State General Fund**

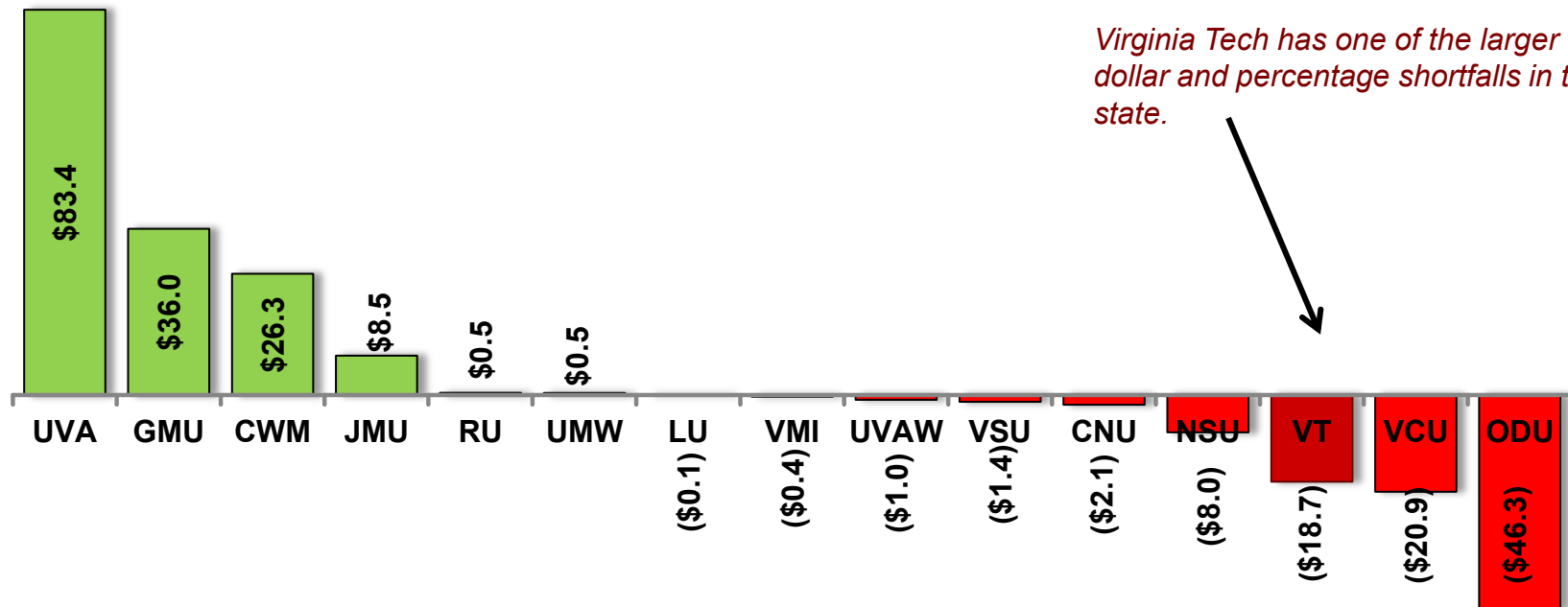


Institutional Resources for Base Adequacy Vary Across the Commonwealth

2013-14 SCHEV Funding Shortfall Calculation As of Fall 2013 \$s in Millions

*This is the Commonwealth's
 recognized shortage of faculty, staff,
 and resources for operation at
 Virginia Tech.*

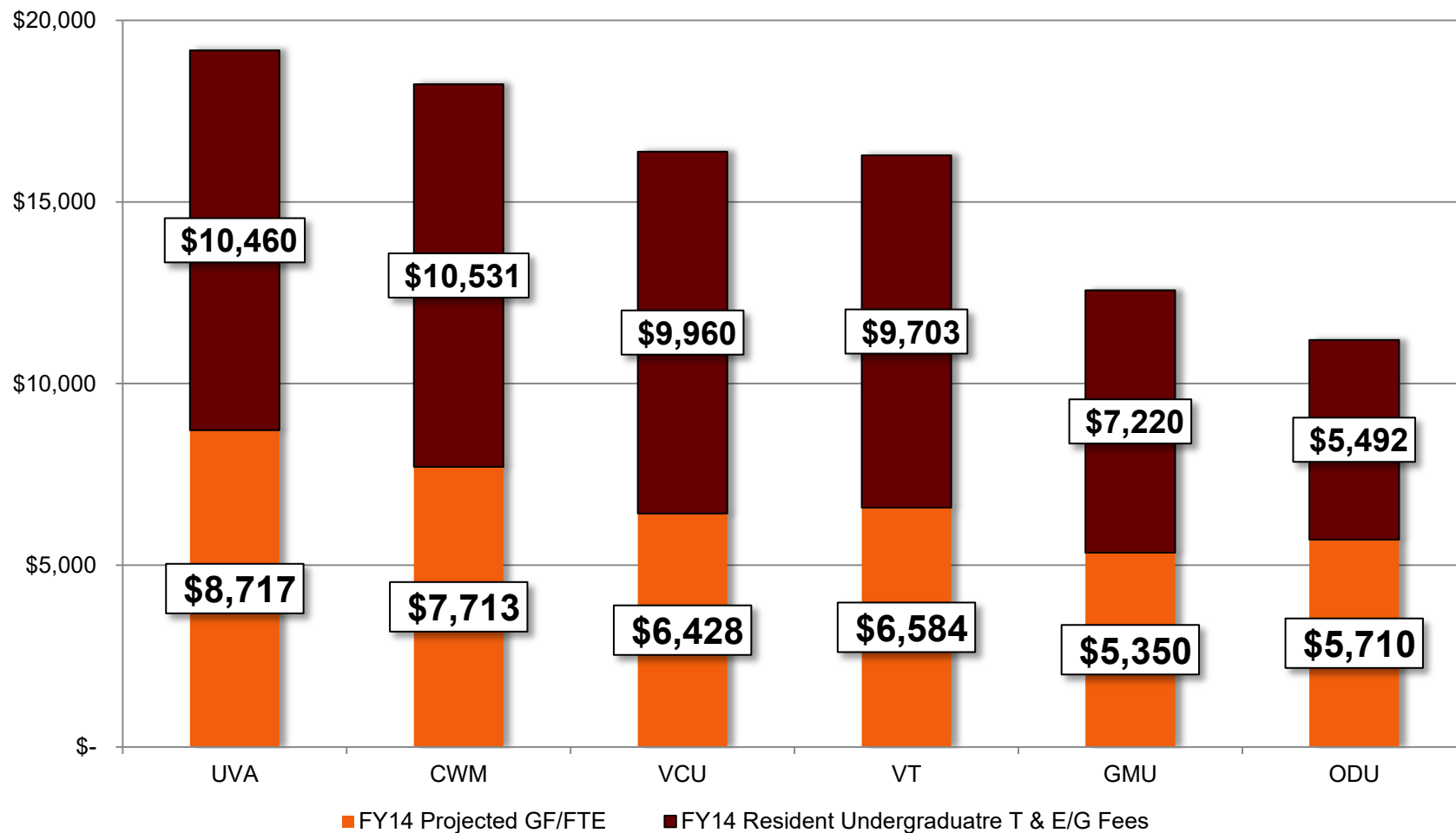
*Virginia Tech has one of the larger
 dollar and percentage shortfalls in the
 state.*





Statewide Resources Per Student

Total Estimated Resources Per Resident FTE 2013-14

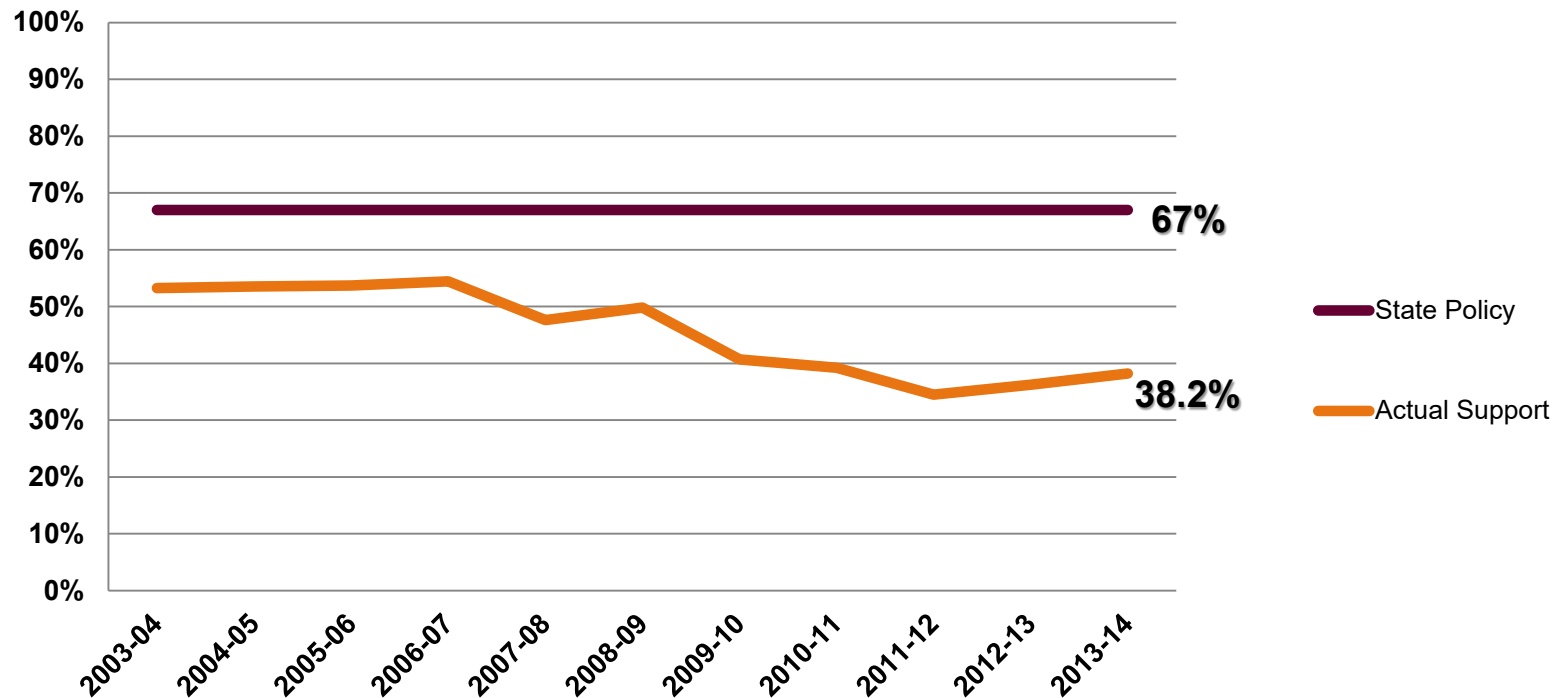


*General Fund includes specific appropriations for non-instructional items such as E&G research, public service, and other amounts not intended to support instructional expenses.

Virginia Tech Funding Need

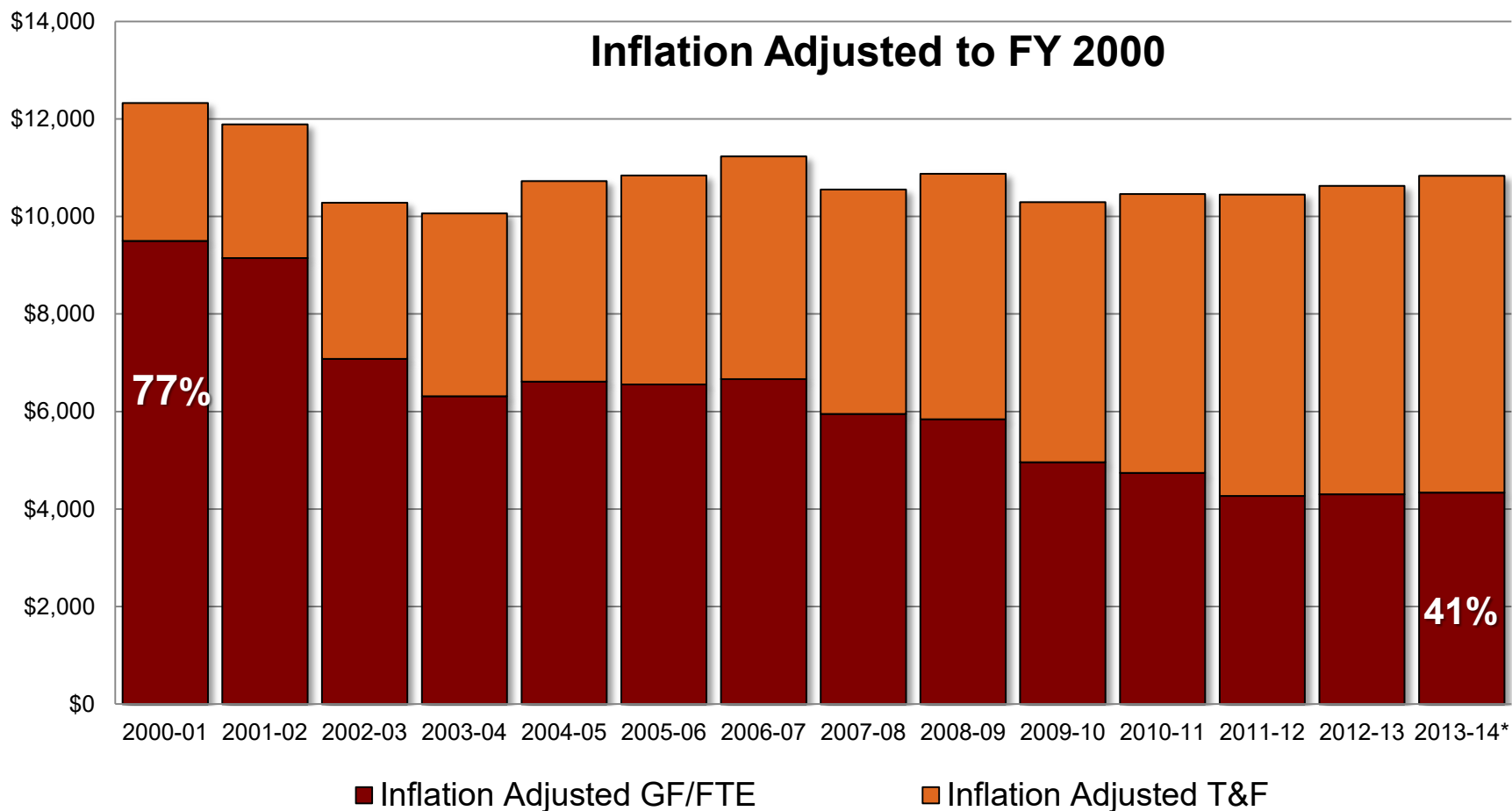
State Funding Policy

General Fund Support for Virginia Resident Student vs. State Policy





Virginia Tech Tuition and General Fund Per Virginia Undergraduate



Status of State Budget Process and Resource Appropriations

Higher Education Challenges in the State Budget Process

- **Increasing competition for constrained State resources**
 - Medicaid
 - K-12
 - Mental Health
 - Transportation
 - Higher Ed is discretionary
 - Not constitutional requirement
- **Greater interest in institutions' planned activities and operational environment**
- **Interest in making limited state resources go further -- required reallocations within higher education**
- **Capital outlay**
 - Constrained state debt capacity
 - Growing backlog of projects in progress

Level of State Support

Incremental E&G State Operating Support for Virginia Tech As of March 6th, 2014 2014-15

	General Fund (\$ in millions)	
	House	Senate
Degree Incentives	\$1.0	\$0.8
O&M of New Buildings	1.3	-
New Full-time Faculty	1.8	-
New Virginia Undergraduate Growth	0.6	-
1% Faculty/Staff Salary Increase	-	0.8
Statewide/Technical Adjustments	0.7	0.7
<i>New Direct GF for 2014-15 E&G Instructional Budget</i>	\$5.4	\$2.3
Fringe Rate Changes	3.9	3.9
<i>Incremental GF for 2014-15 E&G</i>	\$9.3	\$6.2

Level of State Support

- House and Senate Budget proposals as of March 6th include the following support for Virginia Tech in 2014-15:

	General Fund (\$ in Millions)	
	House Budget	Senate Budget
<u>E&G Instructional Budget Support</u>	\$9.3	\$6.2
<u>Designated support outside E&G budget</u>		
Agency 229 VCE/VAES	1.4	1.6
Research:		
Neuroscience (Brain)	2.6	1.6
VTTI (Transportation)	0.3	-
ICAT (Arts & Technology)	0.3	-
Student Financial Aid (Grad and Undergrad)	0.3	0.6
<i>Subtotal Outside E&G Budget</i>	<i>4.9</i>	<i>3.9</i>
<u>One-time Incremental Equipment Trust Fund</u>	<i>2.7</i>	<i>2.4</i>
<i>Total Incremental Direct GF for 2014-15</i>	\$16.9	\$12.5

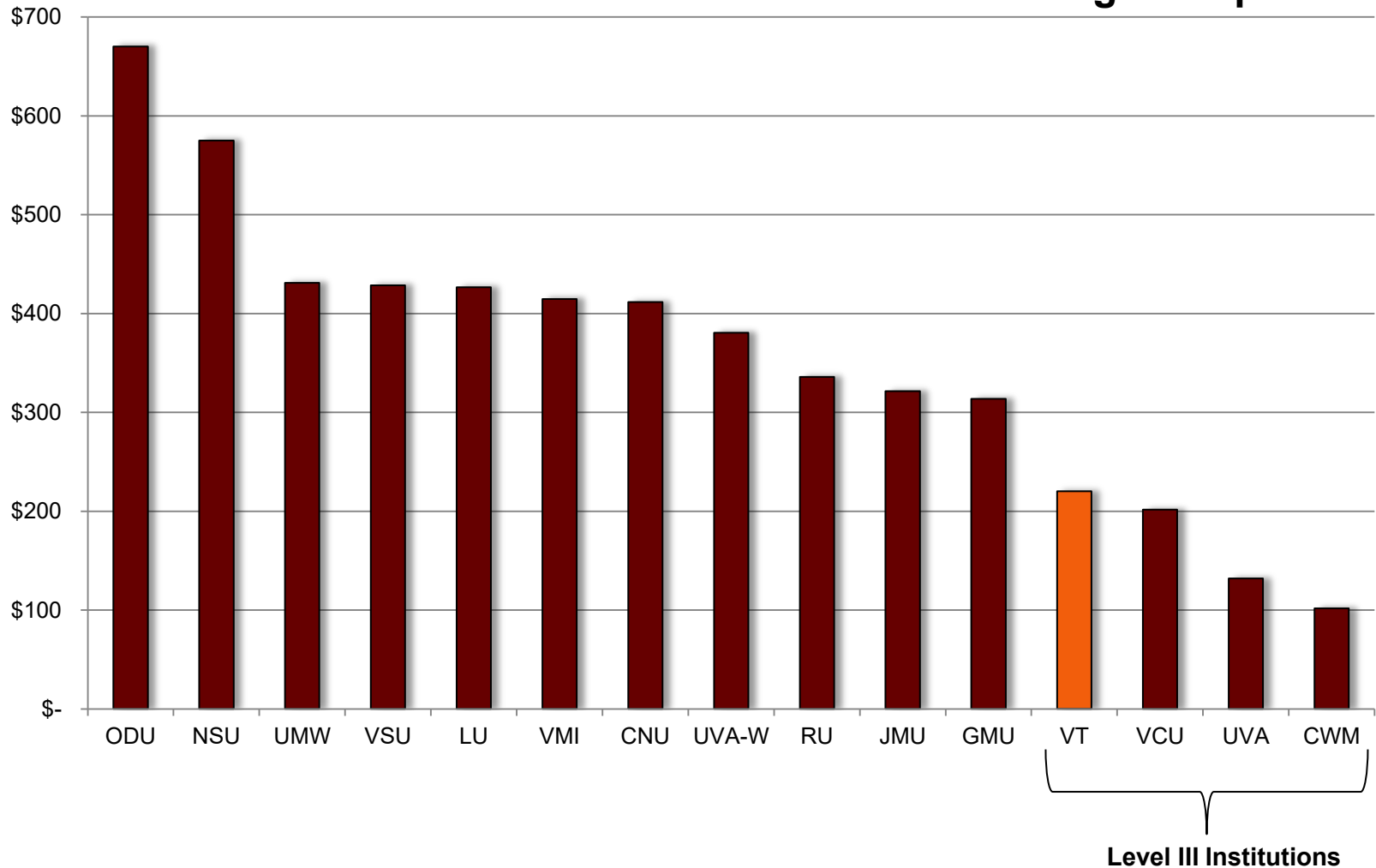
Incremental E&G GF Per Resident Student

- Though new GF support has been proposed in the 2014 General Assembly session, the available GF resources for the instructional division ranked 12th of all public 4-year institutions in the commonwealth (*House Budget Proposal*).

Incremental GF/Resident FTE		
Institution	2014-15	Rank
ODU	670	1
NSU	575	2
UMW	431	3
VSU	429	4
LU	427	5
VMI	415	6
CNU	412	7
UVA-W	381	8
RU	336	9
JMU	321	10
GMU	314	11
VT	220	12
VCU	202	13
UVA	132	14
CWM	102	15

Incremental E&G GF Per Resident Student

Incremental 2014-15 GF/Resident FTE – House Budget Proposal



2014-15 Tuition & Fee Development

Factors Considered in Establishing Tuition & Fees

- **Level of State Support**
- **2014-15 Known Cost Drivers**
 - State assigns costs against nongeneral fund revenues (e.g. salaries, fringe benefits, O&M of facilities)
 - Other Costs (strategic initiatives, fixed costs, etc)
- **University Budget Priorities**
 - Faculty salary competitiveness
 - Base budget adequacy shortfall
 - Six-Year Plan Academic and Operating Priorities
- **Market Considerations**
 - Benchmarking & Studies
- **State Guidance**
 - Both formal and informal
- **Alternative Revenue Strategies**

2014-15 Known Cost Drivers

While the state's 2014-16 Biennial Budget is not yet complete, several key cost drivers are now known, including:

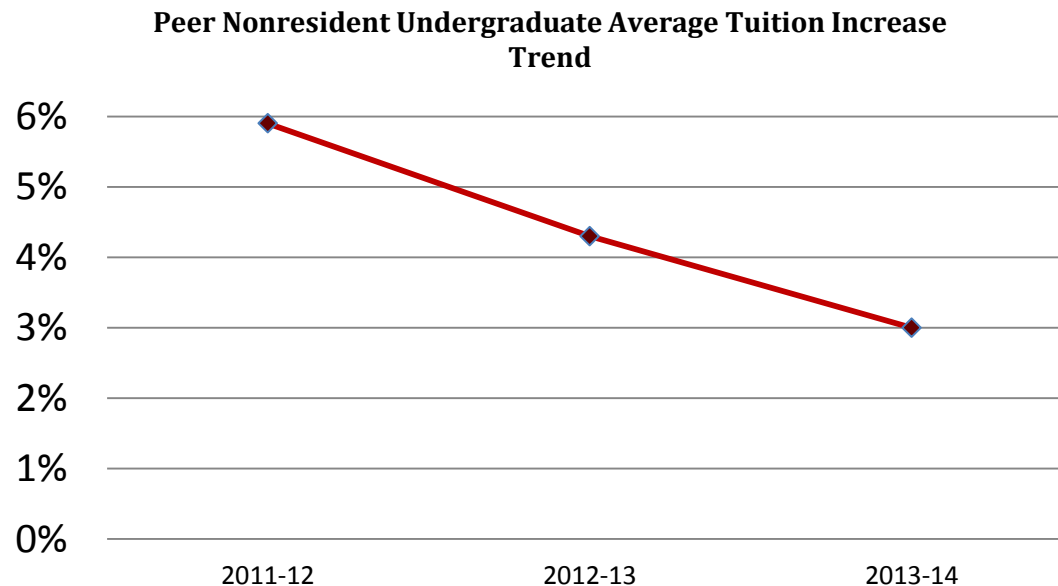
- External NGF assessments from commonwealth, such as:
 - *Retirement: increase of 40%*
 - *Group life, VSDP, Retiree Health all significantly increasing*
 - *Health care: increase of 5.3%*
 - *Other state increases include automobile liability insurance, technology costs, and state charges for administrative system charges*
- Increases in the operating costs of the university including:
 - *Utility costs (electricity, coal)*
 - *Operation & Maintenance of New Facilities*
 - *Student Financial Aid*
 - *Availability of course sections to support enrollment growth*
 - *Library inflation*
 - *Unfunded mandates (accreditation)*
 - *Technology investments*

University Budget Priorities

- Faculty Salary Competitiveness
 - Virginia Tech authorized salary average ranks 23rd of 25 national peers, or the 15th percentile. (AAUP)
 - Virginia Tech average falls short of the 60th percentile by \$14,877 on average. (AAUP)
 - Restoration of an annual merit process to ensure compensation competitiveness is a top priority.
- The university's Base Budget Adequacy shortfall, calculated by SCHEV in Fall 2013, was \$(18.7) million.
 - This represents the Commonwealth's assessment of resources to support the university core mission.
- Six-Year Plan Priorities
 - Resident undergraduate and total Graduate Enrollment Growth
 - Increases in Research, STEM-H degree production, year-round academic opportunities, access & affordability, technology

Market Considerations

- Board has asked the university to move toward market based pricing model.
- Market studies indicate **nonresident undergraduate tuition** has reached upper limits of market capacity.
- Therefore future growth is limited to market movement.
 - This market is slowing, increasing at 3% last year.



Market Considerations-

Virginia Tech Tuition and Fee Benchmarking

	2013-14		
	VT	Average	VT Rank
In-state Undergraduate			
Public SCHEV Peers	\$11,455	\$11,289	11 out of 24
Virginia Institutions	\$11,455	\$10,487	5 out of 15
UVA	\$11,455	\$12,458	
CWM	\$11,455	\$15,463	
Out-of-state Undergraduate			
Public SCHEV Peers	\$27,211	\$28,316	14 out of 24
Virginia Institutions	\$27,211	\$26,443	6 out of 15
Regional Competitive Peers (a)	\$27,211	\$26,660	

(a) Regional competitive peers: Pennsylvania State, Rutgers University, University of Maryland, Ohio State, University of Pittsburgh, and North Carolina State.

Market Considerations-

Virginia Tech Total Cost

Benchmarking

In-state Undergraduate

Public SCHEV Peers

Virginia Institutions

\$19,105

\$19,105

\$21,829

\$19,627

18 out of 24

7 out of 15

Out-of-state Undergraduate

Public SCHEV Peers

Virginia Institutions

\$34,861

\$34,861

\$38,856

\$35,583

17 out of 24

6 out of 15

In-state Graduate

Public SCHEV Peers

Virginia Institutions

\$13,023

\$13,023

\$13,368

\$10,827

10 out of 24

2 out of 12

Out-of-state Graduate

Public SCHEV Peers

Virginia Institutions

\$24,588

\$24,588

\$26,476

\$23,590

15 out of 24

7 out of 12

- Sensitivity to increases
- Undergraduate Student cost share
 - Residents charged 59% of the cost of education
 - Nonresidents charged 152% of the cost of education
- Expectation of constrained tuition capacity
 - 6-Year plan utilized an estimate of 4.9% across-the-board increase.



Tuition and E&G Fee Rate Relationship to the Average Cost of Education Using 2013-14 Actual Rates

	<u>Amount</u>	<u>% of Average</u>
Average Cost of Education	\$16,389	
<u>Undergraduates</u>		
Residents	9,703	59%
Nonresidents	24,855	152%
<u>Graduates</u>		
Residents	11,271	69%
Nonresidents	22,232	136%
<u>Residency</u>		
Residents		61%
Nonresidents		146%

*Amount includes actual tuition and E&G fees for 2013-14. Nonresident Capital and Equipment Fee and Comprehensive fees are not comparable to the Average Cost of Education.

- State support
 - Primarily targeted towards new costs and state goals.
 - Still uncertain at this point.
- Enrollment growth
- Differential Rate Considerations
- Reallocation of existing resources

Alternative Revenue Strategies

Enrollment Growth

- Virginia Tech has been very focused and strategic in pursuing enrollment growth opportunities.
- House budget offers state support to add 50 resident undergraduates (4th installment of 4-year agreement).
- Existing plans for focused growth in targeted programs
 - Ex: Veterinary Medicine, Masters in Information Technology, Business
- Summer Session – new pricing structure successfully adopted to incent growth and support program innovation
- Winter Session – inaugural semester was a success
 - Incremental revenue allocated to colleges and central university resources

Alternative Revenue Strategies

Differential Rate Considerations

Disciplines with Differentials

- Engineering – review market
- Architecture – review market
- College of Business – 4 year phase-in underway

Consideration of New Administrative Fee

- The university is also exploring need to align revenue with specific service delivery costs, where appropriate such as international support services.

Alternative Revenue Strategies

Differential Rate Considerations

On-line Pricing Strategy

- Continue to pilot program of location neutral pricing for self-supporting on-line programs with national or global market reach:
 - Masters in Information Technology- continued implementation
 - New programs to expand pilot:
 - Local Government Management certificate
 - Professional Masters of Agriculture and Life Sciences

Alternative Revenue Strategies

Reallocation of Existing Resources

- University continuously programs resources to highest value expenditures
- As new resources are limited, utilization of reallocation strategies will continue to be a major factor in budget development
- Commonwealth has required higher education institutions to reallocate in support of goals of the Higher Education Opportunity Act in previous years – a practice utilized annually by Virginia Tech to program resources to highest priority initiatives.

2014-15 Planning Considerations

2014-15 E&G Cost Drivers

(\$s in millions)

Compensation

	Total	Fund Split	
		State	University
Faculty Merit Increase: 2.7%	\$7.5	\$0.0	\$7.5
University Staff Salary Increase	2.9	0.0	2.9
Graduate Assistant Stipend Increase	0.6	0.0	0.6
Total	\$11.0	\$0.0	\$11.0

2014-15 E&G Cost Drivers

(\$s in millions)

Mandatory State Cost Assignments

	Total	Fund Split	
		State	University
VRS Rate Increase (40%)	\$5.3	\$2.2	\$3.1
Health Insurance Increase	2.5	1.0	1.5
Other Fringe Rate Changes	1.1	0.7	0.4
Other State Cost Assignments (Workers Compensation Insurance, Auto Insurance, Cardinal System)	0.6	0.3	0.3
Total	\$9.5	\$4.2	\$5.3

2014-15 E&G Cost Drivers

(\$s in millions)

Unavoidable Costs

	Total	Fund Split	
		State	University
Operation & Maintenance of New Facilities	\$1.9	\$1.3	\$0.6
Utilities, Litigation, & Fixed Costs	1.7	0.0	1.7
Total	\$3.6	\$1.3	\$2.3

2014-15 E&G Cost Drivers

(\$s in millions)

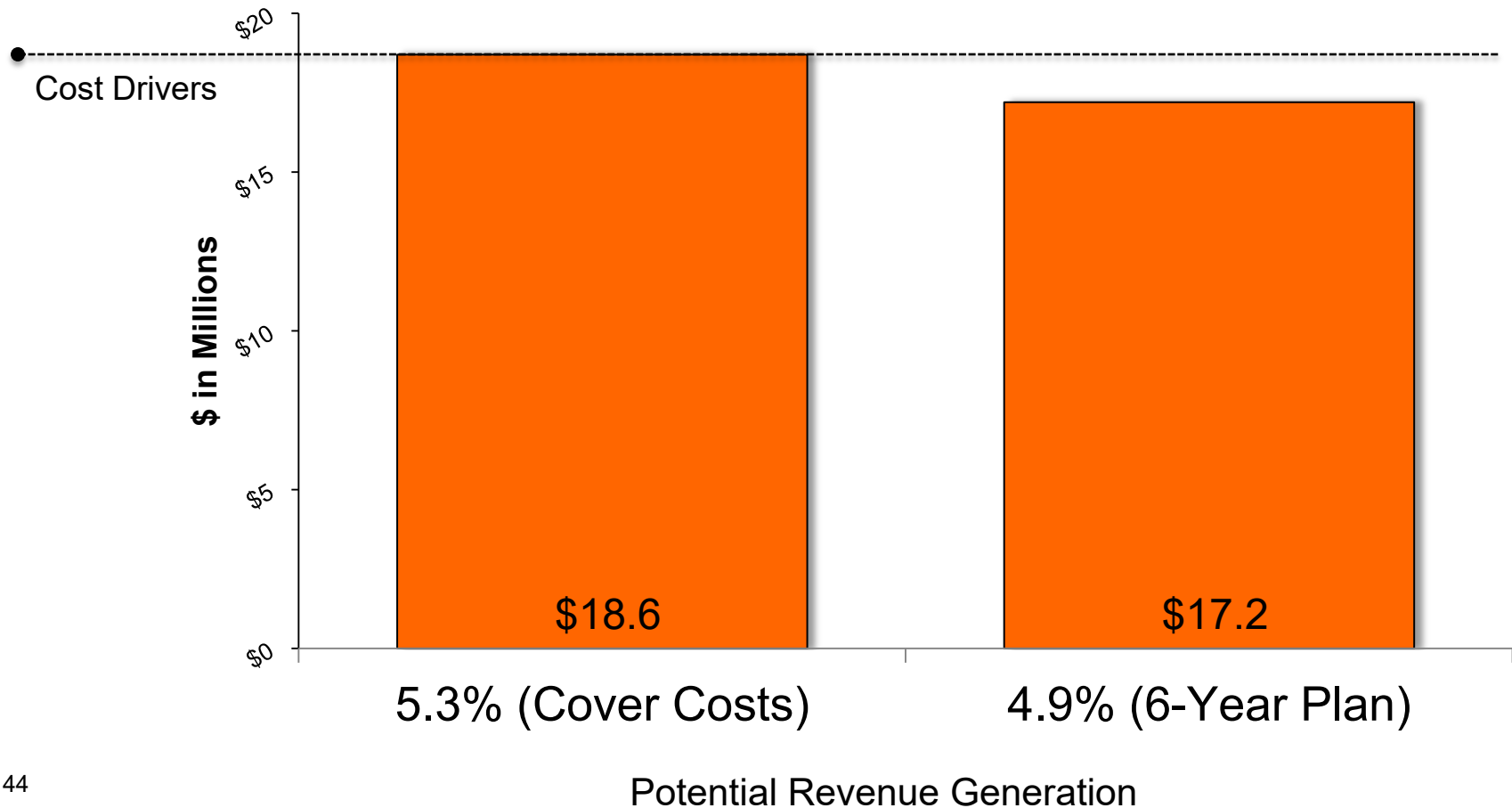
Total Cost Drivers

	Total	Fund Split	
		State	University
Compensation	\$11.0	\$0.0	\$11.0
Mandatory State Cost Assignments	9.5	4.2	5.3
Unavoidable Cost Increases	3.6	1.3	2.3
	\$24.1	\$5.5	\$18.6

**Prior to initiatives or critical needs identified in 2014-15 budget process.*

Tuition Coverage of Nongeneral Fund Costs

- Comparison of incremental revenue generated by tuition rate scenarios to the identified nongeneral fund costs.



Proposed State Support for Academic Initiatives

Incremental E&G State Operating Support for Virginia Tech
As of March 6th, 2014
2014-15

		General Fund (\$ in millions)	
		House	Senate
<i>New Direct GF for 2014-15 E&G Instructional Budget</i>		\$5.4	\$2.3
Restricted - O&M of New Buildings		(1.3)	-
Restricted - Statewide/Technical Adjustments		(0.7)	(0.7)
<i>Remaining E&G Support for New Academic Initiatives</i>		3.4	1.6
<i>Required Allocation towards State Initiatives</i>			
New Full-time Faculty		(1.8)	-
New Virginia Undergraduate Growth		(0.6)	-
1% Faculty/Staff Salary Increase		-	(0.8)
Net Available New E&G GF Resources for Academic Initiatives		<u>\$1.0</u>	<u>\$0.8</u>

Next Steps

- Development of 2014-15 revenue strategy is underway that will:
 - Provide for the university share of state cost assignments including VRS and health care,
 - Make modest progress in faculty salaries,
 - Fund mandatory costs,
 - Be sensitive to market constraints, and
 - Utilize yet-to-be-known incremental General Fund support to advance new academic initiatives.

Questions?

MINUTES

March 24, 2014

The Board of Visitors of Virginia Polytechnic Institute and State University met on Monday, March 24, 2014, at 1:15 p.m. in Torgersen Boardroom (Room 2100), Virginia Tech Campus, Blacksburg, Virginia.

Present

Mr. James L. Chapman, IV
 Dr. Nancy V. Dye
 Mr. William D. Fairchild, III
 Mr. Cordel Faulk
 Mr. B. Keith Fulton
 Mr. John C. Lee, IV
 Ms. Suzanne S. Obenshain
 Ms. Deborah Leigh Martin Petrine (Vice-Rector)
 Mr. Michael J. Quillen (Rector)
 Mr. John G. Rocovich, Jr.
 Dr. J. Thomas Ryan
 Mr. Steve Sturgis
 Mr. Dennis H. Treacy

Absent

Mr. William B. Holtzman

Constituent Representatives:

Dr. Joe Merola, Faculty Representative
 Ms. Sue Teel, Staff Representative
 Mr. Nick Warrington, Graduate Student Representative
 Ms. Erica Wood, Undergraduate Student Representative

Also present were the following: Dr. Charles Steger, Mr. Ralph Byers, Dr. Lay Nam Chang, Mr. John Cusimano, Ms. Wanda Dean, Dr. Karen DePauw, Deputy Chief Gene Deisinger, Dr. John Dooley, Dr. Jack Finney, Dr. Elizabeth Flanagan, Interim Chief Kevin Foust, Dr. Guru Ghosh, Ms. Hunter Gresham, Ms. Natalie Hart, Ms. Kay Heibreder, Mr. Larry Hincker, Mr. Tim Hodge, Dr. Rachel Holloway, Dr. Paul Knox, Ms. Sharon Kurek, Dr. Will Lewis, Ms. Heidi McCoy, Dr. Mark McNamee, Dr. Scott Midkiff, Ms. Kim O'Rourke, Mr. Mark Owczarski, Dr. Patty Perillo, Dr. Ellen Plummer, Dr. Timothy Sands, Ms. Savita Sharma, Mr. Dwight Shelton, Ms. Sandra Smith, Dr. Tom Tillar, Dr. Robert Walters, Dr. Sherwood Wilson, faculty, staff, students, guests, and reporters.

* * * * *

Rector Quillen asked for a motion to approve the minutes of the November 18, 2013 and the December 6, 2013, meetings as distributed. The motion was made by Mr. Rocovich and seconded by Mr. Faulk. The minutes were approved.

REPORT OF THE ACADEMIC AFFAIRS COMMITTEE

Rector Quillen called on Ms. Obenshain for a report of the Academic Affairs Committee. (Copy filed with the permanent minutes and marked Attachment A.)

As part of the Academic Affairs Committee report, approval of the following resolution was moved by Ms. Obenshain, seconded by Mr. Treacy, and approved unanimously.

Resolution to Approve the Bachelor of Science Degree in Microbiology

That the resolution to approve the bachelor of science degree in microbiology be approved. (Copy filed with the permanent minutes and marked Attachment B.)

As part of the Academic Affairs Committee report, approval of the following resolution was moved by Ms. Obenshain, seconded by Mr. Treacy, and approved unanimously.

Resolution to Approve the Bachelor of Science Degree in Nanoscience

That the resolution to approve the bachelor of science degree in nanoscience be approved. (Copy filed with the permanent minutes and marked Attachment C.)

As part of the Academic Affairs Committee report, approval of the following resolution was moved by Ms. Obenshain, seconded by Mr. Rocovich, and approved unanimously.

Resolution to Approve the Bachelor of Science Degree in Computational Modeling and Data Analytics

That the resolution to approve the bachelor of science degree in computational modelling and data analytics be approved. (Copy filed with the permanent minutes and marked Attachment D.)

REPORT OF THE BUILDINGS AND GROUNDS COMMITTEE

Rector Quillen called on Mr. Rocovich for a report of the Buildings and Grounds Committee. (Copy filed with the permanent minutes and marked Attachment E.)

* * * * *

As part of the Buildings and Grounds Committee report, approval of the following resolution was moved by Mr. Rocovich, seconded by Mr. Fairchild, and approved unanimously.

Resolution for Approval of the Demolition of University Building 433J

That the resolution authorizing the demolition of building number 433J be approved. (Copy filed with the permanent minutes and marked Attachment F.)

* * * * *

As part of the Buildings and Grounds Committee report, approval of the following resolution was moved by Mr. Rocovich, seconded by Mr. Fairchild, and approved unanimously.

Resolution for Approval of Smithfield Plantation Historic Easement

That the resolution authorizing the university to partner with the Smithfield-Preston Foundation and execute the historic Deed of Gift of Easement from Preservation Virginia be approved. (Copy filed with the permanent minutes and marked Attachment G.)

* * * * *

REPORT OF THE FINANCE AND AUDIT COMMITTEE

Rector Quillen called on Ms. Petrine for the report of the Finance and Audit Committee. (Copy filed with the permanent minutes and marked Attachment H.)

* * * * *

As part of the Finance and Audit Committee report, approval of the following resolution was moved by Ms. Petrine, seconded by Mr. Chapman, and approved unanimously.

**Resolution for Approval of the Year-to-Date Financial Performance Report
(July 1, 2013 – December 31, 2013)**

That the report of income and expenditures for the University Division and the Cooperative Extension/Agricultural Experiment Station Division for the period of July 1, 2013, through December 31, 2013, and the Capital Outlay report be accepted. (Copy filed with the permanent minutes and marked Attachment I.)

* * * * *

As part of the Finance and Audit Committee report by Ms. Petrine and with the endorsement of the Academic Affairs Committee, the following resolution was moved by Ms. Petrine, seconded by Mr. Rocovich, and approved unanimously.

**Resolution for Approval of the 2014-15 Compensation Program
for Graduate Assistants**

That the graduate assistant compensation program for 2014-15 be approved. (Copy filed with the permanent minutes and marked Attachment J.)

* * * * *

As part of the Finance and Audit Committee report by Ms. Petrine and with the endorsement of the Buildings and Grounds Committee, the following resolution was moved by Ms. Petrine, seconded by Mr. Rocovich, and approved unanimously.

**Resolution to Approve the Capital Project for Constructing the
Marching Virginians Practice Facility**

That the resolution authorizing Virginia Tech to proceed with a \$3.5 million authorization supplement for the construction of the Marching Virginians Practice Facility funded entirely with non-general fund revenues be approved. (Copy filed with the permanent minutes and marked Attachment K.)

* * * * *

As part of the Finance and Audit Committee report by Ms. Petrine and with the endorsement of the Buildings and Grounds Committee, the following resolution was moved by Ms. Petrine, seconded by Mr. Rocovich, and approved unanimously.

**Resolution to Approve the Capital Project for Planning the
Health Center Improvements**

That the resolution authorizing Virginia Tech to move forward with a \$200,000 planning authorization for the Health Center Improvements project be approved. (Copy filed with the permanent minutes and marked Attachment L.)

* * * * *

As part of the Finance and Audit Committee report by Ms. Petrine and with the endorsement of the Buildings and Grounds Committee, the following resolution was moved by Ms. Petrine, seconded by Mr. Rocovich, and approved unanimously.

**Resolution to Approve the Capital Project for Planning the
South Recreation Field Replacement**

That the resolution authorizing Virginia Tech to move forward with a \$230,000 planning authorization for the South Recreation Field Surface Replacement project be approved.
(Copy filed with the permanent minutes and marked Attachment M.)

* * * * *

As part of the Finance and Audit Committee report by Ms. Petrine and with the endorsement of the Buildings and Grounds Committee, the following resolution was moved by Ms. Petrine, seconded by Mr. Rocovich, and approved unanimously.

**Resolution to Approve the Capital Project for New Athletic Field
House Financing Plan**

That the resolution authorizing Virginia Tech to complete the new Athletics Field House project under the revised financing plan be approved. (Copy filed with the permanent minutes and marked Attachment N.)

* * * * *

REPORT OF THE RESEARCH COMMITTEE

Rector Quillen called on Mr. Lee for the report of the Research Committee. (Copy filed with the permanent minutes and marked Attachment O.)

* * * * *

As part of the Research Committee report by Mr. Lee, the following resolution was moved by Mr. Lee, seconded by Ms. Petrine, and approved unanimously.

Resolution to Approve Appointments to the Virginia Coal and Energy Research and Development Advisory Board

That Peter C. Diakun, J. Mark Estepp, Donna Price Henry, C. David Hudgins, David T. Lawson, and William Murray be appointed as members of the Virginia Center for Coal and Energy Research and Development Advisory Board for 2014-2018.

(Copy filed with the permanent minutes and marked Attachment P.)

* * * * *

REPORT OF THE STUDENT AFFAIRS AND ATHLETICS COMMITTEE

Rector Quillen called on Mr. Faulk for the report of the Student Affairs and Athletics Committee. (Copy filed with the permanent minutes and marked Attachment Q.)

* * * * *

PRESIDENT'S REPORT

Dr. McNamee introduced Steven H. McKnight, Vice President for National Capital Region.

* * * * *

Report of Research and Development Disclosures

As part of the President's report, President Steger shared with the Board the **Report of Research and Development Disclosures** – for information only, no action needed. (Copy filed with the permanent minutes and marked Attachment R.)

* * * * *

President Charles Steger expressed his appreciation for the Board's support during his tenure as President. He added that it has been an honor and privilege to serve Virginia Tech as President. President Steger also commended the Board on their selection of Dr. Timothy Sands as the 16th President of Virginia Tech.

* * * * *

Motion to Begin Closed Session

Ms. Petrine moved that the Board convene in a closed meeting, pursuant to § 2.2-3711, Code of Virginia, as amended, for the purposes of discussing:

1. Appointment of faculty to Emeritus status, the consideration of individual salaries of faculty, consideration of Endowed Professors, review of departments where specific individuals' performance will be discussed, and consideration of personnel changes including appointments, resignations, tenure, and salary adjustments of specific employees and faculty leave approvals.
2. The status of current litigation and briefing on actual or probable litigation.
3. Special Awards.

all pursuant to the following subparts of 2.2-3711 (A), Code of Virginia, as amended, .1, .7, and .10

The motion was seconded by Mr. Rocovich and passed unanimously.

* * * * *

Litigation Report

Not for Approval

* * * * *

Motion to Return to Open Session

Following the Closed Session, members of the press, students, and the public were invited to return to the meeting. Rector Quillen called the meeting to order and asked Ms. Petrine to make the motion to return to open session.

Ms. Petrine made the following motion:

WHEREAS, the Board of Visitors of Virginia Polytechnic Institute and State University has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provision of The Virginia Freedom of Information Act; and

WHEREAS, Section 2.2-3712 of the Code of Virginia requires a certification by the Board of Visitors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Visitors of Virginia Polytechnic Institute and State University hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board of Visitors.

The motion was seconded by Mr. Rocovich and passed unanimously.

* * * * *

Upon motion by Mr. Faulk and second by Mr. Rocovich, unanimous approval was given to the Ratification of the Selection of the 2014-15 Student Representatives to the Board as considered in Closed Session.

T. Austin Larrowe of Woodlawn, Va., a junior majoring in agricultural and applied economics in the College of Agriculture and Life Sciences, was named the undergraduate student representative.

S. Ashley Francis of Blacksburg, Va., a master's degree student in the Public Health program in the Virginia-Maryland Regional College of Veterinary Medicine, will be the graduate student representative.

* * * * *

Upon motion by Mr. Rocovich and second by Mr. Fairchild, unanimous approval was given to the resolution for approval of **Naming of a University Facility** as considered in Closed Session. (Copy filed with the permanent minutes and marked Attachment S.)

* * * * *

Upon motion by Ms. Obenshain and second by Mr. Rocovich, unanimous approval was given to the following sets of resolutions:

Approval of Emeritus status (5) as considered in Closed Session. (Copies filed with the permanent minutes and marked Attachment T.)

Approval of Endowed Chairs, Professorships, or Fellowships (6) as considered in Closed Session. (Copies filed with the permanent minutes and marked Attachment U.)

Approval of Change in Name of the Commonwealth Professorships to Rolls Royce Commonwealth Professorships of and appointments to the Rolls Royce Commonwealth Professorships (3) as considered in Closed Session. (Copy filed with the permanent minutes and marked Attachment V.)

Approval of Faculty Research Leave Requests (76) as considered in Closed Session. (Copy filed with the permanent minutes and marked Attachment W.)

* * * * *

Upon motion by Ms. Petrine and second by Mr. Chapman, approval was given to the resolution for ratification of the **Personnel Changes Report** as considered in Closed Session. This item was reviewed by the Finance & Audit and Academic Affairs Committees. (Copy filed with the permanent minutes and marked Attachment X.)

* * * * *

Upon motion by Mr. Rocovich and second by Mr. Faulk, approval was given to the **Resolution of Appreciation for President Charles W. Steger**. (Copy filed with the permanent minutes and marked Attachment Y.)

* * * * *

Appointment of Nominating Committee for Officers of the Board

Rector Quillen appointed the following nominating committee for officers of the Board for 2014-15:

Chair: Nancy V. Dye
Members: B.K. Fulton and James L. Chapman IV

* * * * *

Constituent Reports (No action required.)

(Note: The constituent representatives delivered their reports to the Board on the previous day, March 23, at the Board's information session.)

- **Undergraduate Student Representative to the Board – Ms. Erica Wood**
- **Graduate Student Representative to the Board – Mr. Nick Warrington**
- **Staff Representative to the Board – Ms. Sue Teel**
- **Faculty Representative to the Board – Dr. Joe Merola**

(Copies filed with the permanent minutes and marked Attachment Z.)

* * * * *

The date for the next regular meeting is June 1-2, 2014, in Blacksburg, Virginia.

* * * * *

Following a motion by Mr. Rocovich and second by Mr. Faulk, the meeting adjourned at 3:06 p.m.

Michael J. Quillen, Rector

Kim O'Rourke, Secretary

Committee Minutes

ACADEMIC AFFAIRS COMMITTEE

**Drillfield Room, Inn at Virginia Tech and Skelton Conference Center
8:45 – 11:30 a.m.**

March 24, 2014

Board Members Present:

Suzanne Obenshain (Chair), Nancy Dye, Tom Ryan, Dennis Treacy, Nick Warrington (graduate student representative). Also in attendance: Joe Merola (faculty representative). Rector Michael Quillen.

Guests:

Sarah Armstrong, Janice Austin, Adam Bujnowski, Kris Bush, Lay Nam Chang, Dan Cook, Katie Cross, Wanda Hankins Dean, Karen DePauw, Jarell Eddie, Karen Eley Sanders, Mark Embree, Jack Finney, Guru Ghosh, Rachel Holloway, Randy Heflin, Mildred Johnson, William Lewis, Gary Long, Allison Matthiessen, Peter Macedo, Steven McKnight, Mark McNamee, Ashley Meier, P. Morgan, Robin Panneton, Ellen Plummer, David Popham, Timothy Sands, Eric Smith, Ken Smith, Ann Stevens, Kenneth Stevens, Judy Taylor, Sue Teel, Ruth Waalkes, Richard Walker, Brenda Winkel, Ashley Wood.

OPEN SESSION

1. Welcome.

Suzanne Obenshain welcomed committee members and guests.

2. Approval of Minutes.

A motion was made and passed unanimously to approve the minutes of the committee's November 18, 2013 meeting.

- 3. Report of Closed Session Action Items.** The committee approved a resolution to move into closed session to consider five resolutions to approve appointments to emeritus status; six resolutions to approve appointments to endowed chairs, professorships, or fellowships; a resolution to approve a name change to three endowed professorships and to affirm the appointments of faculty members to these professorships; 76 requests for faculty research leave; and to ratify the faculty personnel changes report.

All resolutions and the report were unanimously approved. The session was formally certified and the committee moved to open session.

4. Provost's Update. Mark McNamee, senior vice president and provost, introduced Dr. Steven McKnight as the recently appointed vice president for the National Capital Region. Dr. McKnight was most recently the division director for civil, mechanical, and manufacturing innovation with the directorate for engineering at the National Science Foundation.

The search for the dean of the College of Liberal Arts and Human Sciences has yielded three finalists. These finalists are visiting campus and the search will come to closure within the next month.

The faculty continues to refine the curriculum. Three new degrees will be presented to the committee in June along with six discontinuances and a department name change. New degrees, discontinued degrees, and other curricular changes reflect the responsiveness of the faculty to developments in the disciplines, student demand, and university priorities.

Guided by The Plan for a New Horizon, the university is taking an in depth look at general education. The Curriculum for Liberal Education (CLE) continues to be reviewed and updated. Discussions are progressing with faculty groups, and specific plans will be presented for university wide consideration. The goal is to have a robust Curriculum for Liberal Education program with strong faculty and student support. The committee will receive a full report at a future meeting.

Wanda Dean, vice provost for enrollment and degree management, provided an update to the committee on undergraduate admissions. Undergraduate applications are up 8% over 2013; the university received 20, 876 applications. The target for the freshman class is 5,400 students, comprised of 3,688 in state students and 1,712 out of state students. The demographics of the applications are quite diverse. Applications from prospective students who identify as African American are up 24% and offers are up 18% from 2013. Applications from prospective students who identify as American Indian are up 8% and offers are up 6% from 2013. Applications from prospective students who identify as Hispanic are up 5% and offers are up 3% from 2013. Applications from prospective students who identify as two or more races are up 15% and offers are up 5% from 2013. Some of the challenges faced in undergraduate admissions include that 52% of the university's out of state applications are specifically for admission to the College of Engineering; similarly, 41% of in state applications are for admission in the College of Engineering.

The university's inaugural Winter Session was held over the winter of 2013-2014. Session enrolled 1055 students in 68 courses and generated \$1.28M for departments and faculty salaries.

The Joint Legislative Audit and Review Committee (JLARC) report regarding academic spending and workload was issued on December 9, 2013. The study includes information on Instructional Spending, Faculty Compensation, Faculty Workload, Research Spending, Instructional Technology, and Research and Instruction Facilities. Virginia Tech fared well in the report. The university continues to strive to improve faculty salaries. Faculty members workload has increased over the past decade and Virginia Tech's faculty are teaching more credit hours and larger classes.

5. Academic Initiatives.

- a. Resolution to Approve the Bachelor of Science Degree in Microbiology.** Dr. Lay Nam Chang, dean of the College of Science, provided background regarding the College of Science which is deeply committed to advancing the university's strategic goals in science training, scholarship, and research. Dr. Ann Stevens and Dr. David Popham provided background information on the discipline of microbiology and presented for consideration a resolution to approve the Bachelor of Science degree in microbiology.

The Resolution to Approve the Bachelor of Science Degree in Microbiology was unanimously approved by the committee.

- b. Resolution to Approve the Bachelor of Science Degree in Nanoscience.** Dr. J.P. Morgan provided background on plans the College of Science has for implementing a number of multidisciplinary degree programs. Dr. Randy Heflin, professor of physics, presented for consideration a resolution to approve the Bachelor of Science degree in nanoscience.

The Resolution to Approve the Bachelor of Science Degree in Nanoscience was unanimously approved by the committee.

- c. Resolution to Approve the Bachelor of Science Degree in Computational Modeling and Data Analytics.** Dr. Eric Smith, professor and department head of statistics, presented for consideration a resolution to approve the Bachelor of Science degree in computational modeling and data analytics.

The Resolution to Approve the Bachelor of Science Degree in Computational Modeling and Data Analytics was unanimously approved by the committee.

6. Faculty Affairs.

- a. Update on Virginia Tech data from The Collaborative on Academic Careers in Higher Education initiative (COACHE).** Dr. Jack Finney, vice provost for faculty affairs, updated the committee on data from the 2012 – 2013 COACHE Survey of Virginia Tech faculty satisfaction. Areas of strength at Virginia Tech include the faculty's satisfaction with a climate that supports research, interdisciplinary work,

collaboration, access to mentoring, and positive department quality. Virginia Tech was not at the bottom of any of the categories within its peer group. However, Virginia Tech will continue to improve on the clarity of tenure procedures, strong senior, divisional, and departmental leadership, and departmental collegiality. The provost has charged each college with identifying three areas of improvement.

7. Academic Administration and Support.

- a. Update on the Fifth Year Interim Review Southern Association of Colleges and Schools - Commission on Colleges (SACSCOC).** Dr. Ken Smith, vice provost for resource management and institutional effectiveness, updated the committee on the fifth year interim review by the Southern Association of Colleges and Schools – Commission on Colleges (SACSCOC). The fifth-year interim report is due in March, 2015. The report will include information on the university's compliance on two core requirements, eight comprehensive standards, 11 federal requirements, and an impact report on the university's First Year Experience Quality Enhancement Plan (QEP).
- b. Update on Academic Progress and Support of Student Athletes.** Dr. Rachel Holloway, vice provost for undergraduate academic affairs, updated the committee on the academic progress and support of student athletes. Virginia Tech's student athletes perform well academically, including 90% graduation success rate in the Atlantic Coast Conference. Student athletes receive support through the Student Athlete Academic Support Success (SAASS). Center staff provides student athletes with consultation, academic coaching, supervised study halls, learning assistance, and tutoring. Katie Meier, a member of the women's soccer team, and Jarell Eddie who plays for the men's basketball team, spoke about the academic support they each have received from the SAASS.
- c. Arts at Virginia Tech.** Ms. Ruth Waalkes, associate provost for the arts and executive director for the Center for the Arts at Virginia Tech updated the committee on arts initiatives. The arts strategic plan, issued in 2010, outlines the strategic objectives for the arts at Virginia Tech. Strategic goals include a robust array of academic programs, creating an interdisciplinary institute to leverage innovative technologies, provide an exceptional facility, and increase arts participation and cultural awareness. The opening of the Moss Arts Center in November 2013 was a significant milestone in the achievement of the goals outlined in the strategic plan.

8. Adjournment. There being no further business, the meeting adjourned at 11:30.

Virginia Tech Faculty Satisfaction: The 2012-13 COACHE Survey

Jack W. Finney, Vice Provost for Faculty Affairs
Academic Affairs Committee, March 24, 2014

Faculty satisfaction = retention, productivity, and commitment

- What determines faculty satisfaction?
 - Outstanding leadership and vision
 - Satisfactory facilities and work resources
 - Value accorded faculty research, teaching, and service
 - Clear and transparent faculty policies
 - Mentoring to enhance faculty success
 - Compensation and benefits
- How do we measure faculty satisfaction?
 - AdvanceVT Faculty Work-Life Survey
 - Human Resources' Employee Climate Survey
 - COACHE Survey



COACHE

*The Collaborative on Academic Careers in Higher Education
at the Harvard Graduate School of Education*

- Focus on faculty careers
 - Initial emphasis on tenure-track faculty
 - Current focus on tenured and tenure-track faculty
- Survey measures institutional experiences and job satisfaction
 - 20 categories of questions
- National and peer benchmarks
 - More than 40,000 respondents from 77 universities nationwide

Faculty Survey Participants

	Virginia Tech			All Universities
	Total Population	Responses	Response Rate	Response Rate
Overall	1298	648	53%	50%
Men	940	472	50%	47%
Women	358	212	59%	57%
Pre-tenure	269	149	55%	53%
Tenured	1029	535	52%	49%

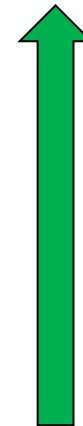
Virginia Tech chose five peer institutions to compare our survey results:

- North Carolina State University
- Purdue University
- SUNY – University at Buffalo
- University of California, Davis
- University of Missouri - Columbia

Areas of Strength at Virginia Tech

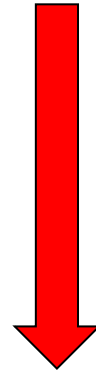
(1st or 2nd among peers, top 30% of universities)

- Nature of work: Research
- Interdisciplinary work
- Collaboration
- Mentoring
- Department quality



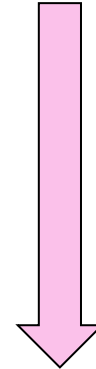
Areas of Concern at Virginia Tech

There were no categories for which Virginia Tech scored 5th or 6th among peers or in the bottom 30%

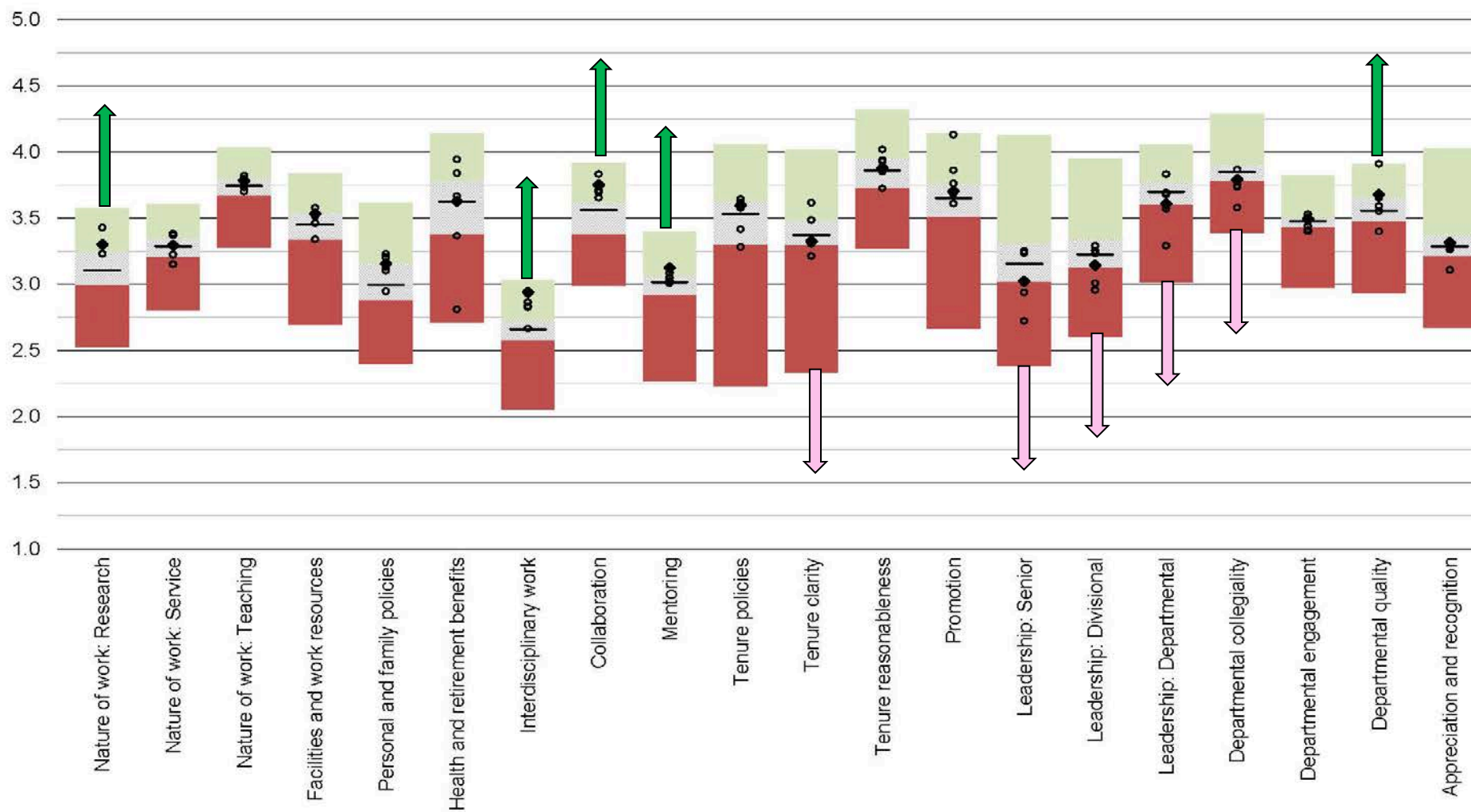


There were five categories for which Virginia Tech scored below the mean of participating universities.

- Tenure clarity
- Senior leadership
- Divisional leadership
- Departmental leadership
- Departmental collegiality



Virginia Polytechnic Institute and State University



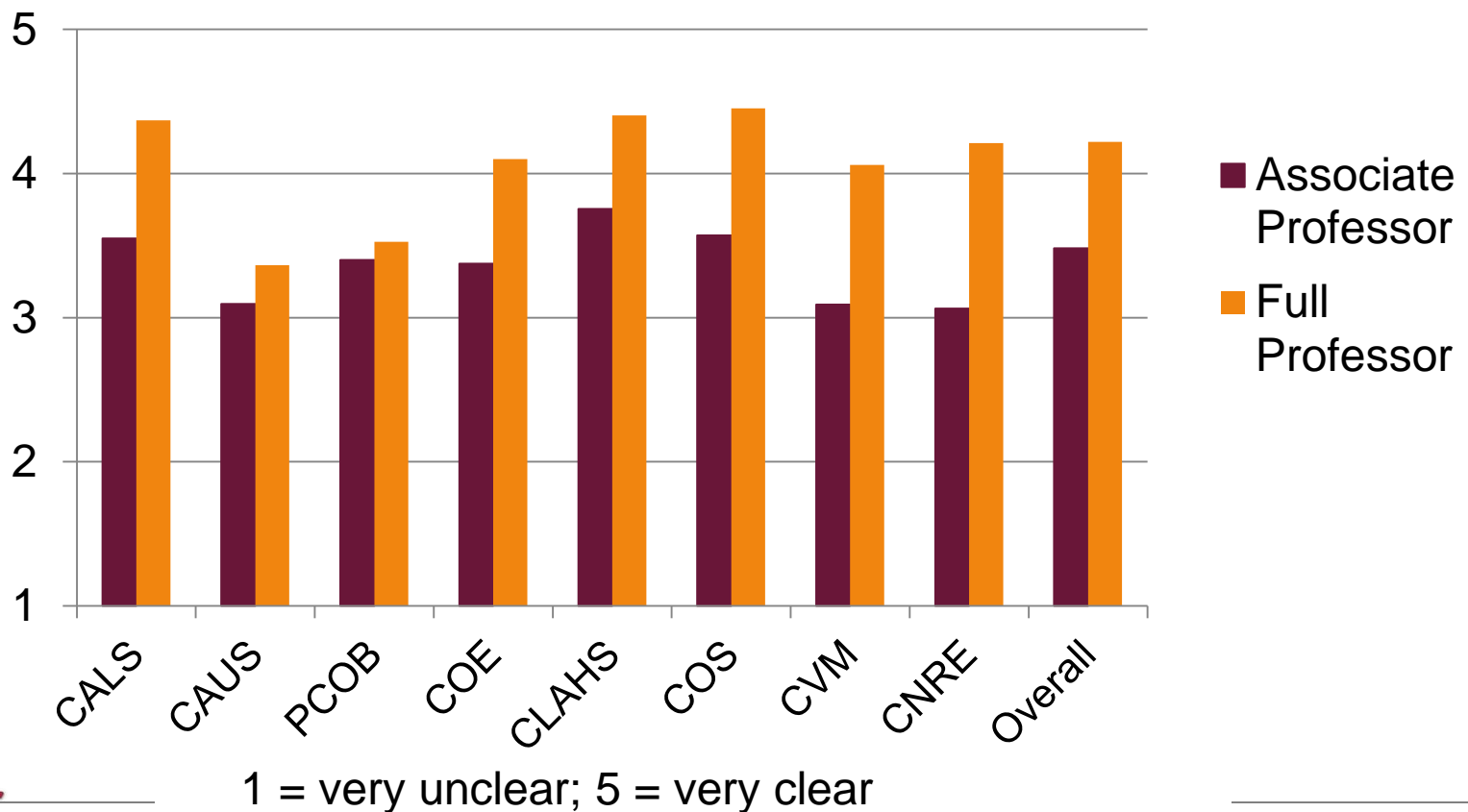
Selected Findings

Transparency of the Tenure Process

Junior faculty believe tenure decisions are made based on performance, but report mixed messages from colleagues.

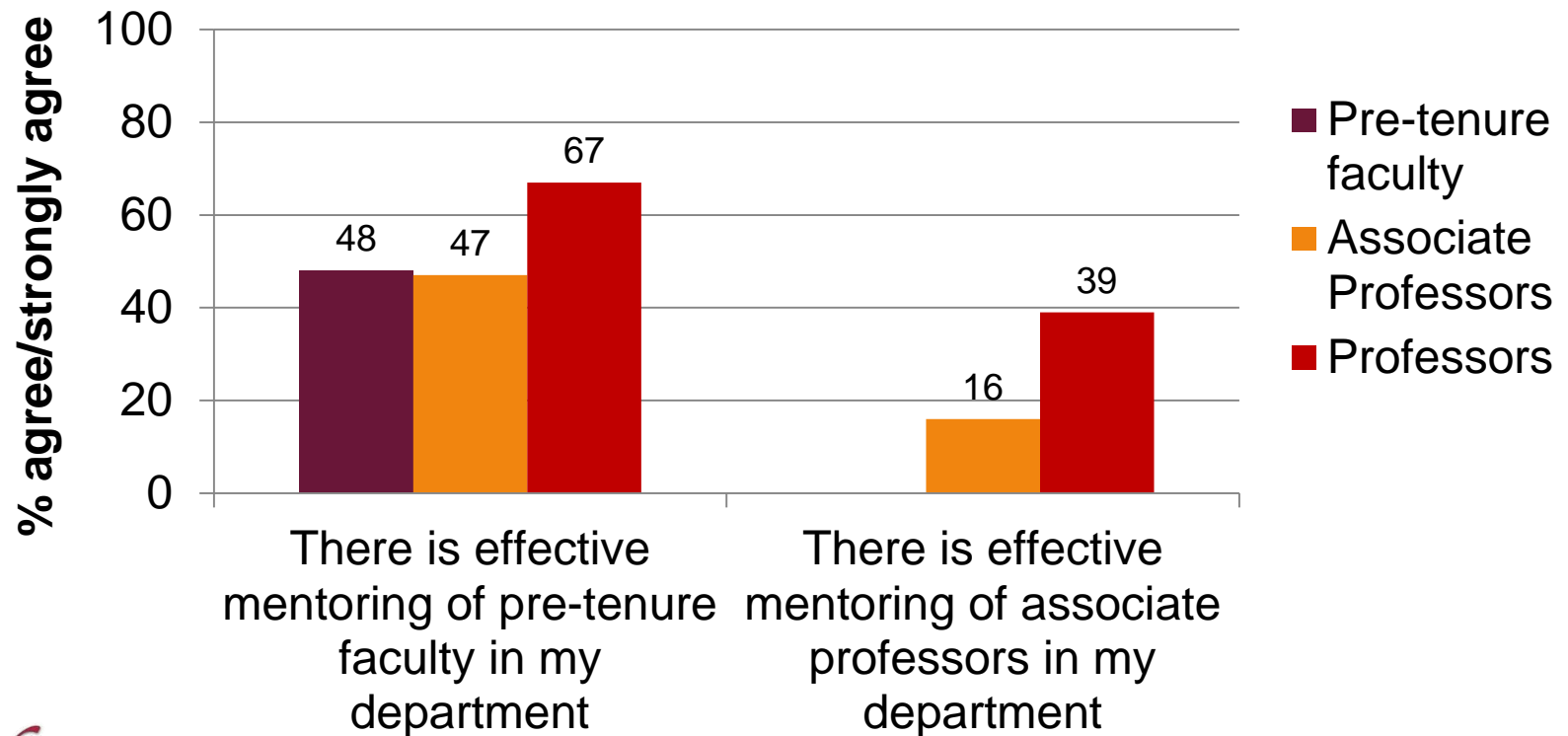
	% agree		
	Us	Peers	All
I have received consistent messages from tenured faculty about the requirements for tenure.	50	48	48
In my opinion, tenure decisions here are made primarily on performance-based criteria (e.g., research/creative work, teaching, and/or service) rather than on non-performance based criteria (policies, relationships, and/or demographics).	69	61	61

The *promotion process* from associate to professor in my department is *clear*.

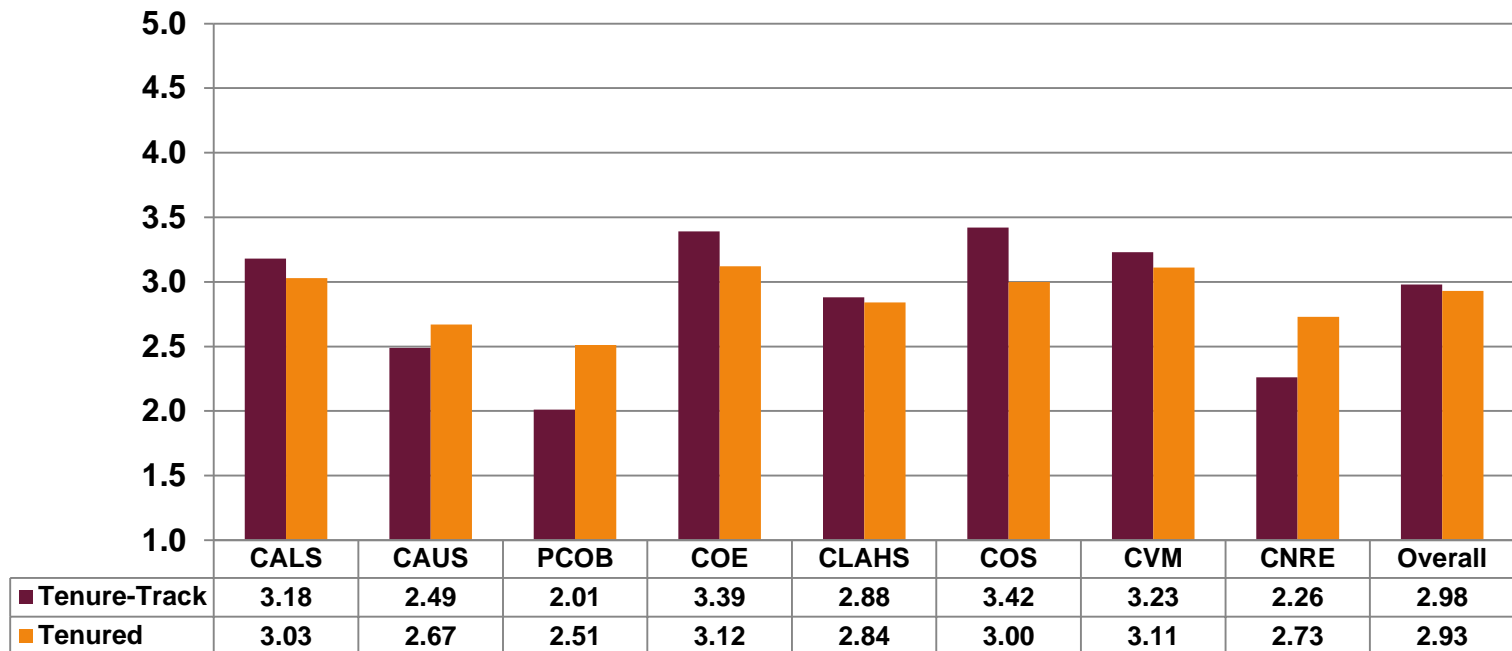


Mentoring

Senior faculty may not be doing as good a job as they think they are...



Overall Perception of Interdisciplinary Work (Pre-tenure vs. Tenured Faculty)



Mean response by college

Satisfaction with Work/Life Policies

Virginia Tech ranks favorably compared to peers and all universities on *institutional* support for balancing personal obligations and academic careers.

Extend the tenure clock policies	4.23
Flexible workload/modified duties	3.74
Family medical/parental leave	3.68
Institution does what it can for work/life balance	3.24
Dual career hiring program	2.94
Childcare	2.89
Eldercare	2.85
Right balance between professional/personal	3.16
Housing benefits	2.46
Tuition waivers, remissions, or exchange	2.12

Global Satisfaction

The majority of Virginia Tech faculty are satisfied, similar to faculty at peer and other universities.

	% Satisfied		
	Virginia Tech	Peers	All
How satisfied are you with your department as a place to work	71	70	71
How satisfied are you with the institution as a place to work	65	64	64
	% Agree		
If I had to do it all over, I would again choose to work at Virginia Tech	62	62	62

Best Aspects about Working at Virginia Tech

	Overall	Tenured	Pre-Tenure	White Faculty	Faculty of Color
Geographic location	1	1	4	1	1
Quality of colleagues	2	2	1	2	2
Academic freedom	3	3	3	3	3
My sense of 'fit' here	4	4	2	4	
Support of colleagues	5	4	2	4	6
Cost of living	6			5	5
Commute					4

Worst Aspects about Working at Virginia Tech

	Overall	Tenured	Pre-tenure	White Faculty	Faculty of Color
Compensation	1	1	1	1	1
Geographic location	2	4	2	4	2
Quality of leadership	3	2		2	
Lack of support for research	3		3	3	
Too much service	4	3		4	
Unrelenting pressure		3	5	4	
Lack of diversity			5		3
Quality of grad students			4		4
Spouse/partner hiring					5

COACHE results are widely shared.

- Academic Affairs Council (Deans & VPs)
- AdvanceVT Leadership Lunch
- Promotion & Tenure Committee Workshop
- Commission on Faculty Affairs
- Department Heads Council
- Advancing Diversity Workshop
- Faculty Senate
- BOV's Academic Affairs Committee
- COACHE's Report - www.advance.vt.edu

Using the COACHE Results

- Each dean identified 3 areas of focus
 - Programs implemented during 2013-14
 - Report of outcomes in May 2014
 - Examples:
 - Mentoring
 - Work/life balance
 - Interdisciplinary work
 - Clarity of tenure requirements
 - Promotion to professor
- Actively use COACHE results to guide program and workshop development

Active involvement with COACHE

- Mark McNamee serves as a member of COACHE's National Advisory Council
- Mark McNamee or Jack Finney attend COACHE Leadership Workshops (held annually each June)
- Jack Finney and Peggy Layne have made national conference presentations on COACHE results

Our Goal:

Virginia Tech will be a leader in improving faculty satisfaction to enhance retention, productivity, and commitment.

Questions?



Update on SACS-COC Fifth-Year Interim Review

Ken Smith, Vice Provost for Resource Management and Institutional Effectiveness

Academic Affairs Committee of the Board of Visitors

March 24, 2014



Overview

- Background
- Accreditation Timeline
- Key Issues
- Status of Preparation and Response



Background

- Southern Association of Colleges and Schools Commission on Colleges (SACS-COC)
- Institutional Effectiveness
- Quality Enhancement Plan (QEP)
- Federal Regulatory Compliance



Background

- Comprehensive review every ten years
- U.S. Department of Education requires more frequent monitoring
- In response, SACS-COC developed the Fifth-Year Interim Report process



Accreditation Timeline

- Last reaffirmation of accreditation in 2010
 - Introduced our Quality Enhancement Plan for “First Year Experience”
- Fifth-Year Interim Report Due March 2015
 - Impact report on “First Year Experience”
- Next Ten-Year Reaffirmation 2019
 - A new Quality Enhancement Plan



Fifth-Year Interim Report Timeline

- April 2014 - Notification by SACS-COC
- March 2015 - Report due to SACS-COC
- June 2015 - Review by the Commission
- Then,
 - If no issues cited - end of the process
 - If issues cited - additional report to the Compliance and Reports Committee



How is the Fifth-Year Interim Report Different from the Ten Year Compliance Certificate?

Ten Year Compliance Certificate

- 16 Core Requirements
- 64 Comprehensive Standards
- 11 Federal Requirements

Fifth-Year Interim Report

- 2 Core Requirements
- 8 Comprehensive Standards
- 11 Federal Requirements
- Impact Report of the Quality Enhancement Plan
- PLUS evidence of compliance for any standards or requirements for which the Commission requests such information



Key Issue: Faculty

Core Requirement 2.8 “Number of full-time faculty members is adequate to support the mission of the institution and to ensure the quality and integrity of each of its academic programs.”

- Total faculty versus *each* academic program
- Less emphasis on instructional load and more emphasis on the broader scope of faculty activities may be added to this requirement by SACS-COC during the year we are reporting.



Key Issue:

Institutional Effectiveness - Learning

Comprehensive Standard 3.3.1.1 “The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results in the following area: educational programs, to include student learning outcomes.”

- Evidence across a variety of programs to include programs from each college and degree level
- Distance learning and off-campus sites



Key Issue: Academic Coordinators

Comprehensive Standard 3.4.11 “For each major in a degree program, the institution assigns responsibility for program coordination, as well as for curriculum development and review, to persons academically qualified in the field.”

- Working with departments to identify program coordinators
- We must document that coordinators are academically qualified in the field if the same coordinator is identified for more than one program



Key Issue – Student Success

Federal Regulation 4.1 “The institution evaluates success with respect to student achievement consistent with its mission.”

- Must demonstrate that acceptable levels of performance or target levels of performance are specified **before** data are collected and analyzed.
- Our Strategic Plan Scorecard and State Council of Higher Education for Virginia (SCHEV) Institutional Performance Standards are excellent examples of how we are compliant with this regulation.



Key Issue: Distance Education

Federal Regulation 4.8.1 “The institution demonstrates that the student who registers in a distance or correspondence education course or program is the same student who participates in and completes the course or program and receives the credit.”

- Secure login and pass code are currently accepted.
- We are exploring proctored exams and other new ID technologies.



Key Issue: Complaints

Federal Regulation 4.5 and Comprehensive Standard 3.13.1 The institution maintains a record of complaints received by the institution and makes this record available to the Commission upon request.

- Definition of complaint – in writing, through a specific portal
- Over-arching policy in development to provide framework and guide complaint procedures in various departments



Key Issue: QEP Impact Report

- Goals → Assessment → Changes
- Impacts on student learning or the environment supporting student learning (intended and unintended)
- Reflection on what the institution has learned as a result of QEP experience



Key Issue: Institutional Effectiveness- Administrative Services

Comprehensive Standard 3.3.1.2 “The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results in the following area: . . . administrative support units.”

- Our reaffirmation of accreditation asked that we address continued compliance with CS 3.3.1.2 in our fifth-year report.



Key Issue: Institutional Effectiveness- Administrative Services

- Workshop series on Administrative Quality Improvement
- Online resources related to Administrative Quality Improvement
 - Identify outcomes —→ construct measures —→ report results
- Intend to also highlight on-going practices of Internal Audit and other administrative offices that measure, report and monitor for improvement.



Status of Preparation and Response

To Date:

- Writing committee formed January 2012
- Regular meetings fall and spring semesters
- Increased meeting frequency fall 2013
- Narrative outlines late August 2013
- Issue/resources identification – November 2013
- Standard-specific meetings are on-going



Status of Preparation and Response

Moving Forward:

- March 21 - First draft narratives due
- April 25 - Official letter will be received
- May 1 - Feedback on first draft narratives
- August 30 - Second draft narratives due
- October 25 - Feedback on second draft narratives
- December 5 – Final drafts due
- March 25, 2015 – Submit Report



QUESTIONS?

Student Athlete Academic Achievement

Rachel Holloway

Vice Provost for Undergraduate Academic Affairs

Academic Affairs Committee

March 24, 2014

512 Student Athletes on 21 Teams

Our student athletes compete in . . .

Baseball

Men's Basketball

Men's Cross Country

Football

Men's Golf

Men's Soccer

Men's Swimming

Men's Track

Men's Tennis

Wrestling

Women's Basketball

Women's Cross Country

Lacrosse

Softball

Women's Golf

Women's Soccer

Women's Swimming

Women's Track

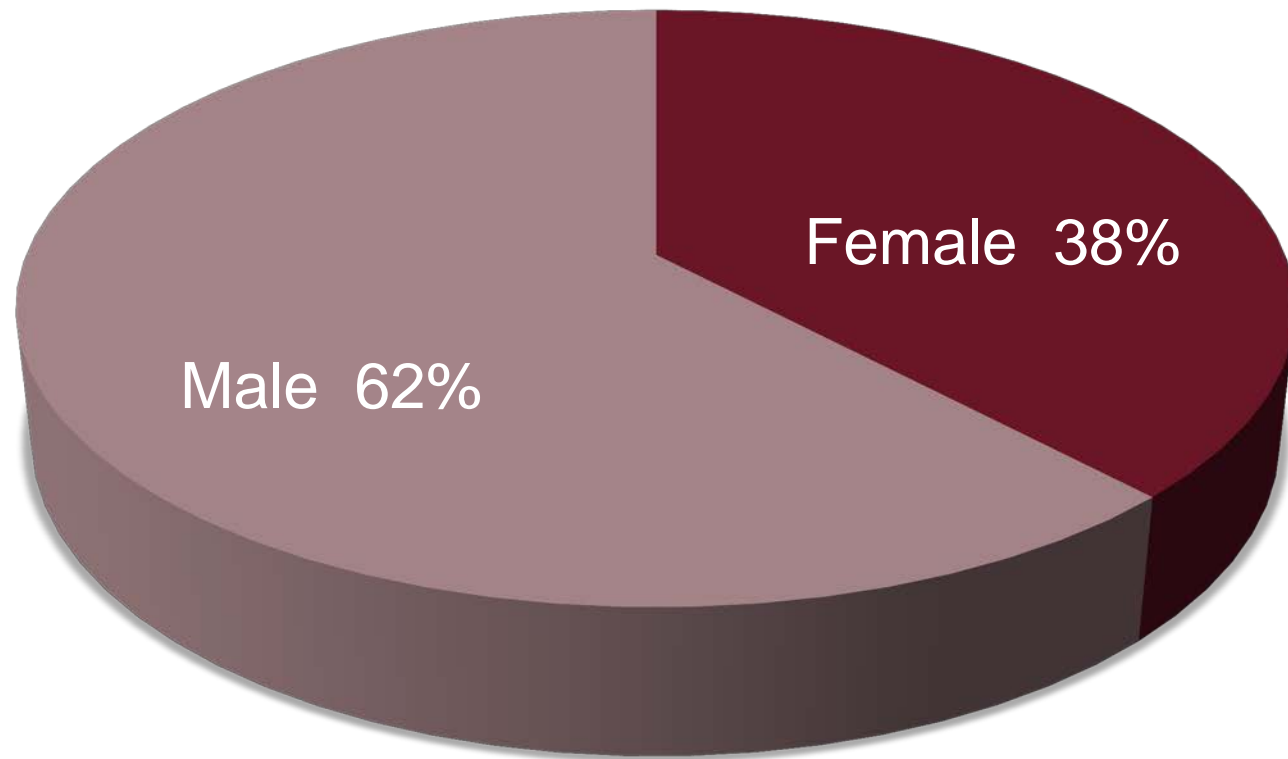
Women's Tennis

Volleyball

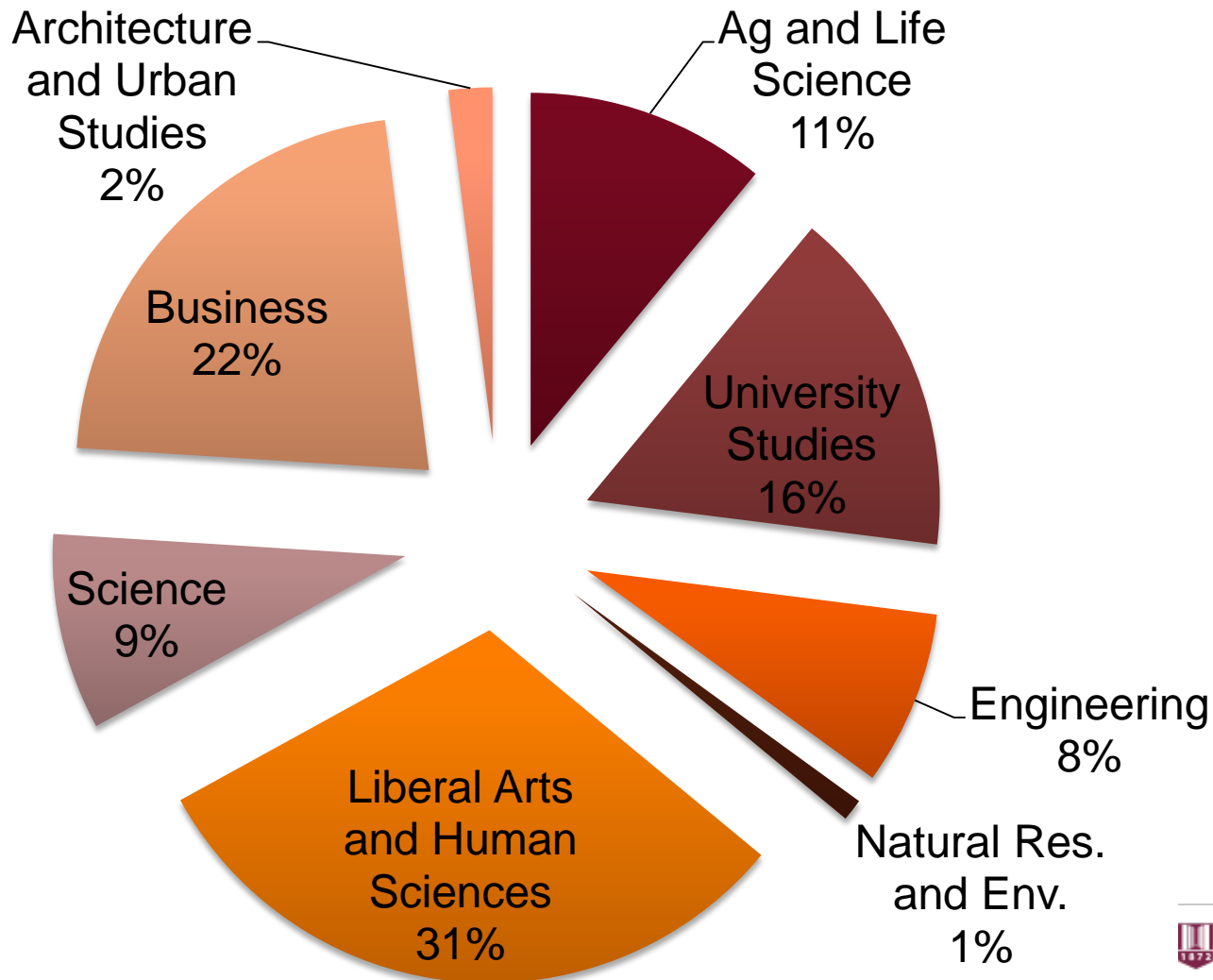
Spirit Squads



Student Athlete Gender Distribution



Student Athlete Majors by College



Most Popular Majors

- University Studies
- Communication
- Human Nutrition, Foods, and Exercise
- Human Development
- Business, Undecided
- Sociology
- Psychology
- Marketing Management
- Apparel, Housing, and Resources Management
- Finance

How are student athletes performing *academically?*

What percent of student-athletes have a cumulative GPA over 3.0?

- A. 48%
- B. 35%
- C. 25%
- D. 15%

25% of student athletes were on the Dean's List for Fall 2013.

What team holds the highest team cumulative GPA?

Baseball

Men's Basketball

Men's Cross Country

Football

Men's Golf

Men's Soccer

Men's Swimming

Men's Track

Men's Tennis

Wrestling

Women's Basketball

Women's Cross Country

Lacrosse

Softball

Women's Golf

Women's Soccer

Women's Swimming

Women's Track

Women's Tennis

Volleyball



Team GPA
3.52 for fall 2013

6-Year Graduation Rates

Student-Athlete Entering Class 2006	Student-Athlete Avg. 2003-2006	All Students Entering in 2006	All Students Avg. for 2003-2006
73%	71%	83%	81%

NCAA Graduation Success Rate

The Atlantic Coast Conference

University of Notre Dame	99
Duke University	98
Boston College	96
Wake Forest University	94
University of Miami	92
Virginia Tech	90
University of Virginia	88
Clemson University	87
Syracuse University	87
University of Maryland	86
University of North Carolina	86
NC State University	82
Florida State University	81
University of Louisville	81
Georgia Tech	79
University of Pittsburgh	77

NCAA Graduation Success Rates

Select SCHEV Peers

Virginia Tech	90
University of Illinois	90
Penn State University	88
Michigan State University	87
University of Florida	83
University of Colorado	81
Purdue University	80
Iowa State University	79
Texas A&M	77
University of Southern California	77

Supporting Student Athlete Academic Success

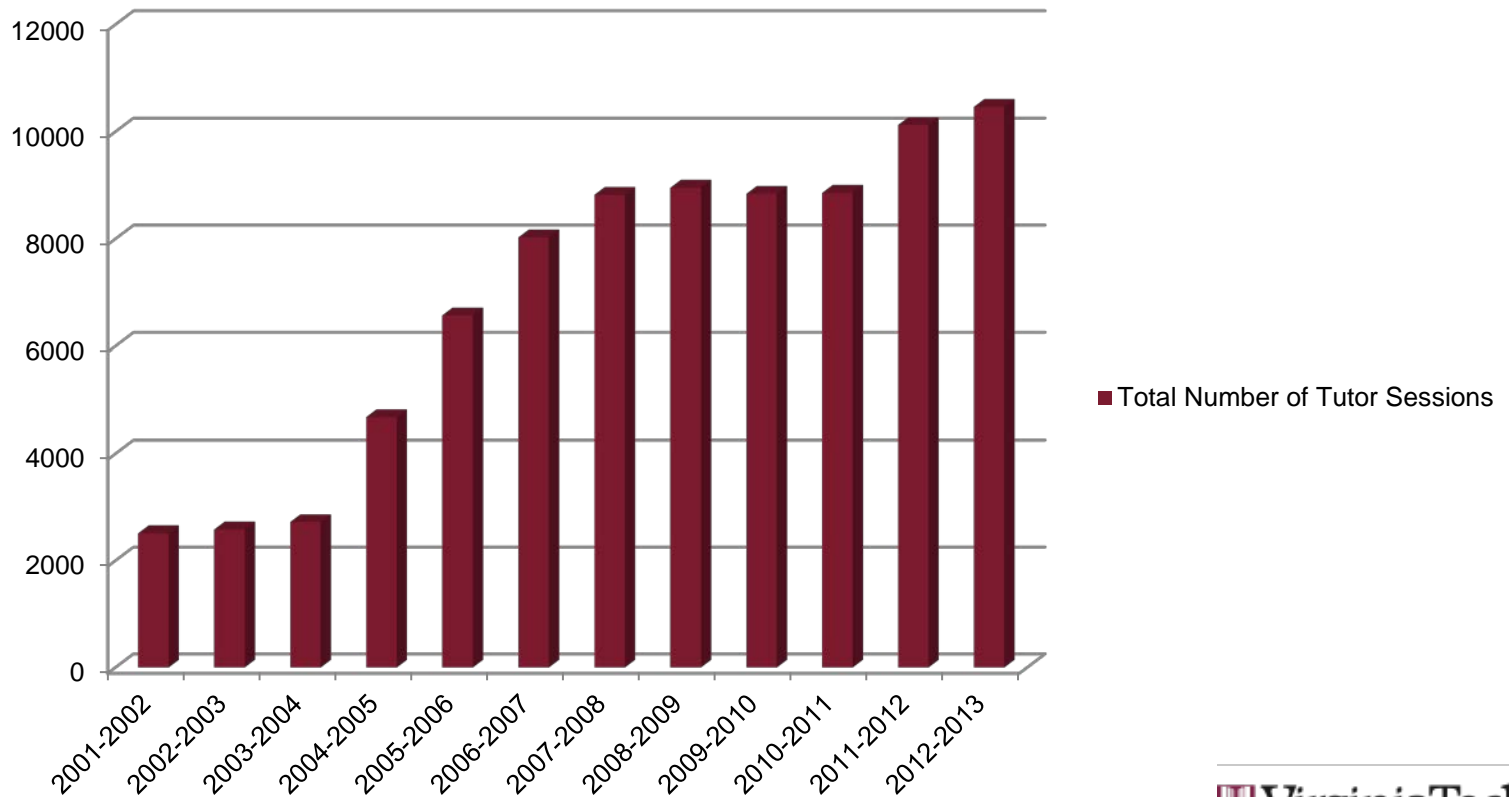
- Supports student-athletes in balancing academic and athletic demands
- Provides comprehensive academic support
 - Consultation with Academic Advisors
 - Academic Coaching
 - Supervised Study Hall
 - Learning Assistance
 - Tutoring

Student Use of SAASS Services -- Study Hall

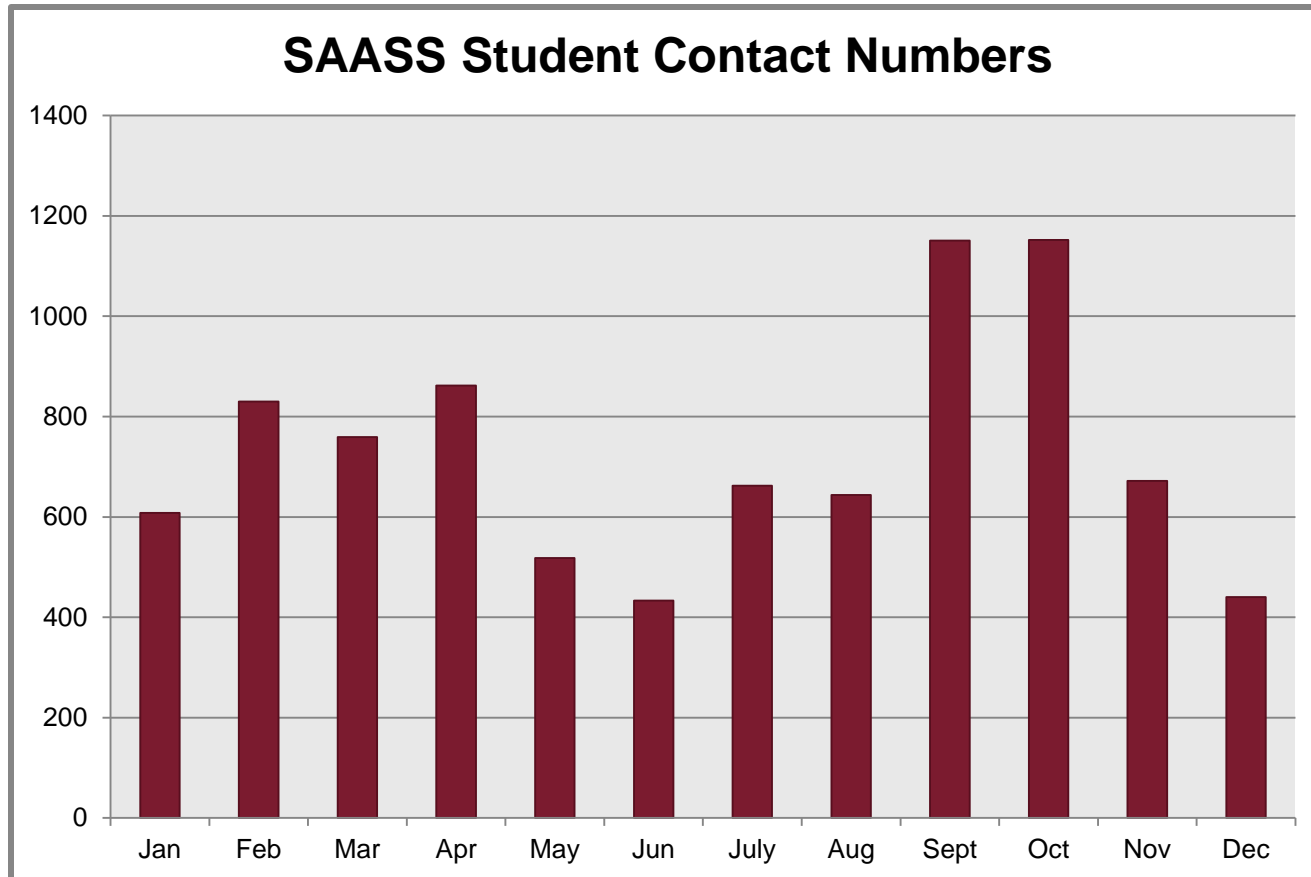
- All freshman student athletes
- All student athletes with less than a 2.3 cumulative GPA.

Student Use of SAASS Services --Tutoring

Total Number of Tutor Sessions



Student Use of SAASS Services -- Contact Hours



In their own words...

Ashley Meier

Sophomore, Human Development major

Midfielder, Women's Soccer

Jarell Eddie

Senior, Psychology major

Forward, Men's Basketball

Questions?

Arts at Virginia Tech

Documents included:

1. Ruth Waalkes – Arts at Virginia Tech presentation
2. The Arts at Virginia Tech: Strategic Directions and Opportunities, 2010

Arts Strategic Plan Update

Board of Visitors Academic Affairs Committee

March 24, 2014

Ruth Waalkes

Associate Provost for the Arts and

Executive Director, Center for the Arts at Virginia Tech

The Arts at Virginia Tech: Strategic Directions and Opportunities



Elevate Virginia Tech as a
comprehensive university

Enhance student learning
with the arts as a vital
part of their education

Bring social, cultural, and
economic benefits to the
community and region

The Arts at Virginia Tech: Strategic Directions and Opportunities

Goal 1

Provide a robust array of academic programs



The Arts at Virginia Tech: Strategic Directions and Opportunities

New and Recent degree programs:

- M.F.A. Creative Technologies, School of Visual Arts (SOVA)
- M.A. Material Culture and Public Humanities (SOVA, Religion & Culture, History)
- M.F.A. Theatre Arts, Arts Leadership emphasis School of Performing Arts (SOPA)

Interdisciplinary Graduate Education Program (IGEP) in Human Centered Design
(for graduate certificate or individualized Ph.D.)

In Development:

- Minor in the Arts



The Arts at Virginia Tech: Strategic Directions and Opportunities

School of Performing Arts

College of Liberal Arts and Human Sciences

Department of Theatre and Cinema

B.A. Theatre Arts: Performance; Design and Technology;
Cinema Studies and Production

M.F.A. Theatre Arts: Design and Technology; Directing and
Public Dialogue; Stage Management; Arts Leadership

Department of Music

B.A. Music:
Composition; Education;
Performance; Technology



School of Visual Arts

College of Architecture and Urban Studies

Art History

B.A. Art – concentration in Art History

M.A. Material Culture and Public Humanities

in partnership with the Departments of Religion and Culture, and History

Visual Communication Design

B.F.A. – concentration in Visual Communication Design

Studio Art

B.F.A. – concentration in Studio Art

Creative Technologies

M.F.A. Creative Technologies



Creative Writing Program

Department of English

College of Liberal Arts and Human Sciences

Creative Writing Program

B.A. English-Creative Writing

M.F.A. Creative Writing



The Arts at Virginia Tech: Strategic Directions and Opportunities

Goal 2

Create an interdisciplinary institute that will leverage innovative technologies



The Arts at Virginia Tech: Strategic Directions and Opportunities

Goal 3

Advance transformative learning and creative educational methodologies to K-12 and higher education environments



Institute for Creativity, Arts, and Technology (ICAT)



a2ru – Alliance for the Arts in Research Universities

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Mellon Foundation Grant

The Alliance for the Arts in Research Universities has been awarded a \$500,000, 3.5 year grant from the Mellon Foundation to create the first comprehensive guide to best practices in the integration of arts practice into research universities. In Fall 2015, the guide is to identify models, obstacles, implementation strategies, costs, and best practices in research, practice, and teaching in other knowledge areas.

With this award, the Mellon Foundation has enabled a2ru to make major progress toward creating a comprehensive guide to research university.

Research Project Director

Bruce M. Mackh, PhD (brucemackh.com) is the Mellon Research Project Director.

Research Plan

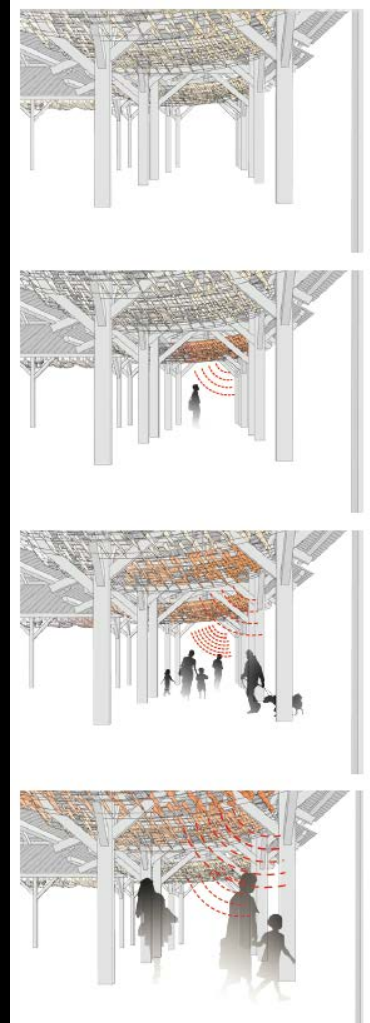
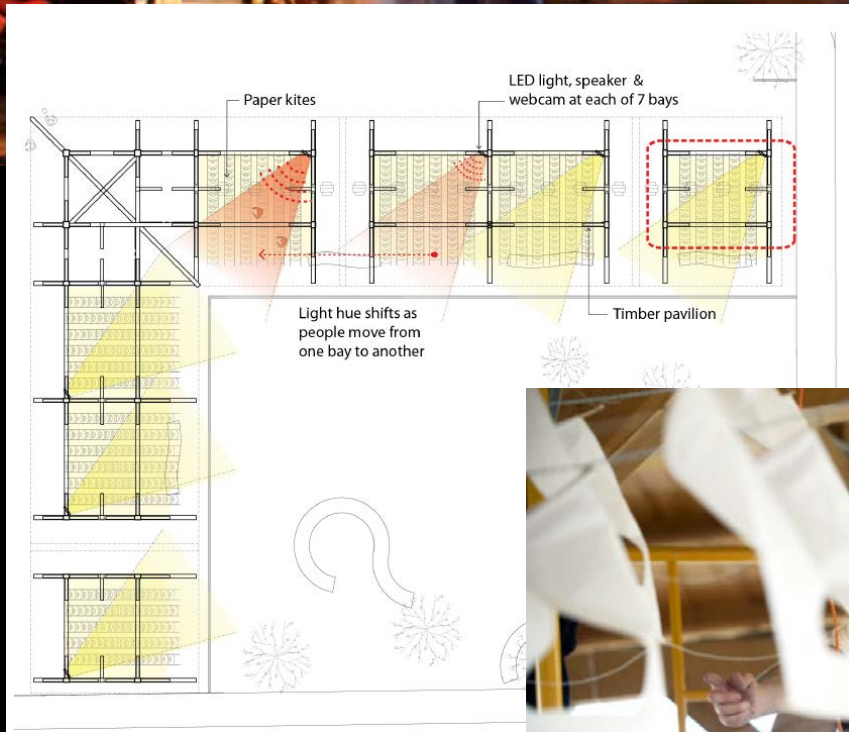
Bruce is making site visits to 11 universities in the first phase of the grant, video performances, lectures, and interviews with colleagues – from provosts to assistant professors – who are attempting to integrate arts and design practice into their universities. In the process, he is gathering documentary evidence, which a2ru will share periodically with our colleagues across the field. He will post multimedia interim reports on the a2ru website every spring, to grow our developing observations.

Virginia Tech is one of 11 universities selected for initial site visits funded by the Mellon Foundation Grant, alongside:

Carnegie Mellon University
MIT
Penn State
Stanford University
University of California, Berkeley
University of Colorado
University of Florida
University of Michigan
Vanderbilt
Virginia Tech
Washington University, St. Louis

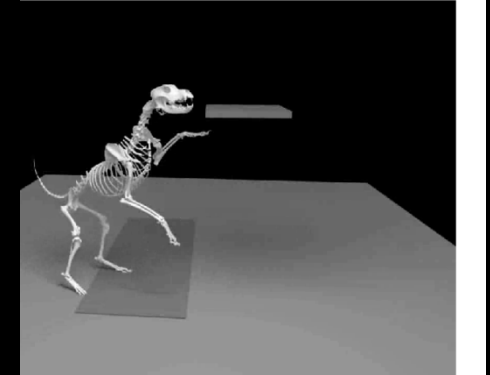
Lantern Field:

Aki Ishida



3-D Visualization Tools to Study Puppy Socialization Behaviors

THOMAS TUCKER



NDSSL Simulation Viewer

from **Dane Webster** 1 year ago [NOT YET RATED]

An interactive viewer of simulation data generated by the Network Dynamics and Simulation Science Laboratory (NDSSL) research group at Virginia Tech. This simulation shows the number of people at given locations for a variety of different attributes (health related and such) after a particular type of disaster event in Washington DC.



Bat Specimen Visualization

from **Dane Webster** 1 year ago [NOT YET RATED]



Maker Camps, K-12 STEM Projects, Hands-On Learning



Opera Craft performance, December 2013

The Arts at Virginia Tech: Strategic Directions and Opportunities

Goal 4

Provide exceptional facilities for performance, teaching, research, and engagement



Completed:

- Henderson Hall Renovation
- Theatre 101
- Studio Kiva Classroom in Burchard Hall
- Moss Arts Center



The Arts at Virginia Tech: Strategic Directions and Opportunities

Underway:

- Library Multi-Media Classrooms
- Art Collection Storage Improvements

Needed:

- Cinema Screening Room
- Art Studios, Performance & Rehearsal Venues
- Public Art



The Arts at Virginia Tech: Strategic Directions and Opportunities

Goal 5

Increase arts participation and cultural awareness



Center for the Arts at Virginia Tech

Program Hallmarks

Artists of regional, national and International prominence... who share our passion for *learning, discovery, and engagement*

Arts experiences that embrace many traditions, cultures, and ideas, reflecting the *diverse world* around us

Exploration and collaboration, new works, *emerging fields and artists*





Moss Arts Center-Opening Night, November 1, 2013



“This Edge I Have to Jump,” The Cube, Fall 2013



Landscape: Another Dimension, 2014



Community Open House, November 3, 2013



Diavolo “Take Offs & Landings” workshop,
November 2013



Student Employment, Hands on Learning



Sphinx Virtuosi school matinee performance,
November 2013

*Transforming lives through exploration and
engagement with the arts
and creative process*



The Arts at Virginia Tech

Strategic Directions and Opportunities

*Submitted to the Offices of the President and Senior Vice President and Provost
by the Chair of the Arts Strategic Planning Team*

Paul Knox

University Distinguished Professor and
Senior Fellow for International Advancement

December 1, 2010

The Arts at Virginia Tech: Strategic Directions and Opportunities

MISSION STATEMENT

The mission of “the Arts at Virginia Tech” is to supply rigorous and innovative academic programs in the arts, promote the discovery and transfer of knowledge garnered through creative research methodologies and professional studio practices, enrich the lives of faculty, students, and arts patrons through performances and engagement initiatives, and leverage technologies to enhance teaching and learning capabilities in PK-12 and higher education environments.

VISION STATEMENT

The arts are a deeply embedded and valued part of life at Virginia Tech; have a direct and lasting impact on the quality of life for our region; and contribute to the economic vitality of the Commonwealth. The arts are essential to a premier research university where students and employees, as well as surrounding community members and future generations of scholars, expect their experiences with the arts to reflect the diverse world in which they live. The goal of the arts at Virginia Tech is to develop a distinctive and innovative profile of educational, research, and outreach programs and activities that integrate the arts while leveraging technologies.

BACKGROUND

In January 1999, the Arts Blueprint for Virginia Tech documented the absence of a strong profile of the arts at Virginia Tech and called for additional support toward creating more aesthetic experiences for undergraduate students, graduate students, and the university community at large. The blueprint called for a Creative Arts Center to serve as the cornerstone for programmatic and performance efforts in the arts. It was noted that Virginia Tech was one of the few top-tier universities in the United States that does not possess either a major performing arts facility or a major art gallery. It was argued that the center would enhance Virginia Tech’s commitment to the arts as an integral ingredient in the lives and learning of our students.

Additional recommendations were included in the original blueprint, such as installing outdoor sculptures to further enhance the aesthetic beauty of campus; initiating a performing arts series with top-class performers and ensembles; establishing an art acquisition program to support major gallery and exhibition spaces; strategically place works of art in classrooms and the library to create arts learning experiences for students and faculty; and enhancing the presence of the arts in the University Core Curriculum. The blueprint recommended placing an emphasis on a visiting artist-in-residence component for periods of one or two weeks. Visiting artists would work in various curricular settings by holding master classes and seminars for students, faculty and the public and would engage individuals in collaborative works of art and learning through art.

In 2005, many of these ideas were carried forward in drafting the 2006-2012 University Strategic Plan. As stated under the Social and Individual Transformation component of the Discovery Scholarship Domain:

The dynamics of economic, social, political, technological, environmental, and cultural change are at the heart of this area of research and creative scholarship which has application in domestic and international public policy and all aspects of community life. (p. 29)

The Virginia Tech Collaborative for Creative Technologies in the Arts and Designs (CCTAD) is committed to the transformative power of the arts and to exploring the intersection between human creativity and technology. (p. 31)

Goal IV. Establish the Virginia Tech Performing and Visual Arts Center...Construct a new Performing and Visual Arts Center that will be catalytic in developing the arts. (p. 33)

In 2005, Minnis Ridenour, Senior Fellow for Resource Development, was asked to develop a strategy for advancing specific plans to construct a Performance Hall, Creative Technologies Lab, and Visual Arts Gallery. The concept of an “Arts Initiative” was developed, with a focus on enhancing the presence and practice of the arts on campus for the benefit of all.

Since 2005, the university has made significant progress in the arts in many ways, including the establishment of the Center for the Arts and conceptualizing the Institute for Creativity, Arts, and Technology (ICAT) through the Arts Policy Board. The Arts Policy Board is charged with providing policy guidance to the Provost and to the Executive Director of the Center for the Arts by providing recommendations and collaborative guidance for policy level decisions concerning the operation of the Center for the Arts and the Institute for Creativity, Arts, and Technology. The Board membership includes:

Senior Vice President and Provost, Chair

Senior Fellow for Resource Development, Convener

Deans, Colleges of Architecture and Urban Studies and College of Liberal Arts and Human Sciences

Vice President, Finance and CFO

Vice President, Student Affairs

Directors, Schools of Education, Performing Arts and Cinema, and Visual Arts; and University Unions and Student Activities (UUSA).

Meanwhile, much progress remains to be made in arts programming, arts research, and in the productivity of educational programs, particularly at the master’s level. Additional development is needed to evaluate financial models and sustainable funding mechanisms for the Institute for Creativity, Arts, and Technology. A startup and incubation plan for the organizational and financial structure of this dynamic research entity will assist with the establishment of a Charter in order to receive recognition as a new Institute through the university governance process. Forecasting and planning simulations must be undertaken to assist with the scope and scale of creative research work, instructional activities, and outreach. Projected cluster hires for faculty engaged in the work of the Institute will engage all participating colleges and departments to leverage the many synergistic opportunities available.

PARTNERS

To be successful, the arts at Virginia Tech must engage a broad range of university and community partners and programs. These include, but are not limited to:

- Office of the Senior Vice President and Provost
- College of Architecture and Urban Studies
 - School of Visual Arts
 - Studio Art
 - Art History
 - Visual Communication Design
 - Fine Arts in Creative Technologies MFA program
- College of Liberal Arts and Human Sciences
 - School of Performing Arts and Cinema
 - Music
 - Theatre & Cinema
 - Creative Writing MFA program
 - Department of Communication
 - School of Education
- Institute for Creativity, Arts, and Technology (ICAT)
- Center for the Arts
- University Unions and Student Activities (UUSA) and other Student Affairs units
- Office of the Senior Fellow for Resource Development
- Information Technology
- University Development
- Facilities and Planning Departments
- Town of Blacksburg
- PK-12 Schools and School Systems
- Faculty at Virginia Tech and at other Colleges/Universities who are engaged in technological advancements in higher education pedagogy
- Regional Arts Organizations, including the Taubman Museum of Art in Roanoke, Roanoke Symphony Orchestra, the Barter Theatre in Abingdon, and Mill Mountain Theatre in Roanoke

CAPITAL PROJECTS: NEEDS AND OPPORTUNITIES

Arts District

A proposed “Arts District” encompasses the southeast part of campus that includes numerous arts-related facilities on campus and downtown, and that is anchored by the nearby site for the new Center for the Arts: The Armory, the Digital Arts & Animation Studio, the Digital Interactive Sound and Intermedia Studio, 4Design (in Henderson), Theatre 101, and the Lyric Theatre. There is an opportunity to link these and the Center for the Arts with an ‘Arts Walk’ - a pathway around and through town and campus populated with art.

Squires Student Center, Campus

In the medium- and longer term, the facilities in Squires will need to be significantly upgraded, or replaced, and class and rehearsal rooms, storage, and laboratory space used by the Music Department

need to be significantly upgraded, renovated or replaced. The Perspective Gallery, Recital Salon (238 seats), Studio Theatre (225 seats), and Haymarket Theatre (460 seats) are essential facilities for existing programs and also need upgrading.

College Avenue/Roanoke & Otey Streets

A significant opportunity exists for the development of the current parking lot across College Avenue from Squires. A mixed-use development could accommodate arts-related offices and programming space, together with retail and graduate housing; a parking structure could provide revenues that – after debt service – could be set aside to support the arts. The Media Building might also be considered as part of a core downtown Arts District.

Outdoor Sculpture Space

An outdoor sculpture initiative requires a clearly defined acquisition program for large sculptures with potential for national or international significance. A number of potential locations for such pieces have already been identified (*Master Plan for Outdoor Public Art*, 1999), and a sub-committee for Public Art on Campus, chaired by Larry Hincker, was established in 2010.

Arts in Place

This initiative would aim to increase the acquisition and exhibition of 2-D and 3-D art in campus settings.

Residence Hall

An Arts-themed residential learning community could support and enhance the overall strategic goal of developing a distinctive approach to integrative arts at Virginia Tech.

Accommodations for Visiting Artists

Currently, the university has no accommodations for visiting artists. Creating and maintaining such a space is a priority for expanding Visiting Artist programs.

Storage Space

There is a current need for better/expanded storage space for the university art collection.

Screening Facilities

There is an imminent need for additional screening facilities; one to accommodate 75, one to accommodate 300.

Proscenium House

There is a projected need (College of Liberal Arts and Human Sciences) for a proscenium house with 500-600 seats.

STRATEGIC GOALS

Goal 1

Strengthen learning through the arts by providing a robust array of academic programs that are rigorous and sustainable and by embarking upon innovative programmatic opportunities that integrate the arts.

- Objective 1: Systematically review existing undergraduate programs in the arts with the goal of utilizing reinvestment strategies to further enhance the programs of: Visual Arts, Art History, Theatre Arts, Cinema, and Music.
- Objective 2: Expand enrollment in master's programs and establish additional MFA programs that meet the rising demand for merging the arts with technological and scientific applications. Key areas for strategic investment might include visualization, animation, interdisciplinary arts, gaming, medical arts technologies, material culture, digital cinema production, digital music applications, technological applications in education, and 3-D architectural, ecological, and geospatial simulation.
- Objective 3: Provide support to the professional development and recognition of exceptionally talented faculty who serve as creative scholars.
- Objective 4: Enhance university resources that support sustainable academic programs in the arts. In particular, scholarships and assistantships for master's students, additional faculty lines, visiting scholar support, and endowed chairs and professorships in the Arts are needed.

Goal 2

Strengthen discovery through the arts through the creation of an integrative interdisciplinary Institute that will pull together a group of academic faculty and their associates (research associates, scientists, visiting artists, graduate students, undergraduate students, and staff) to pursue research goals that draw upon two or more disciplines and leverage innovative technologies.

- Objective 1: Support an incremental build-up over five years of approximately 20 FTE positions dedicated to translational research facilitated by the Institute.
- Objective 2: Support and encourage technology transfer from the Institute to regional and national industries and organizations by awarding seed money for promising projects and assisting with intellectual property agreements that reward faculty engaged in such projects.

Goal 3

Strategically advance transformative educational learning models and creative educational research methodologies to PK-12 and higher education classrooms and learning environments.

- Objective 1: Leverage expertise to enable the delivery of education research discoveries and instructional products that engage Virginia teachers and students in PK-12 school systems and faculty and students at Virginia Tech and other colleges/universities throughout the Commonwealth.

Objective 2: Create unique opportunities for PK-12 students to develop creative and critical thinking skills through the merger of arts and technology, with a focus on improved learning and performance in all subject matters.

Objective 3: Forge partnerships with other universities, PK-12 schools, cultural institutions and leading corporations to obtain and administer large-scale projects that position the Commonwealth for a significant presence in the fast-growing sectors of creative and cultural enterprise.

Goal 4

Provide exceptional facilities and space that advance new methods of performance, teaching, research, and student and community engagement.

Objective 1: Complete the Center for the Arts, a complex of new and renovated facilities that will feature first-class performance and exhibition spaces with adjoining educational research laboratories. The building will include a 1,260 seat performance hall, gallery spaces, and will house the research center/institute.

Objective 2: Increase student, faculty, staff, and community access to new and traditional art forms at the international, national, community, and campus levels.

Objective 3: Support initiatives that foster reflection, conversation, and learning about other cultures and philosophies through artistic expression and creative scholarship.

Objective 4: Increase program linkages and partnerships across the university with local and regional affiliates to enhance visual and performing arts programming that spur community and economic development efforts (for example, summer festivals).

Objective 5: Increase acquisition of arts space to bolster the range and reach of exhibits and events on campus, surrounding communities, and the Commonwealth.

Objective 6: Develop an arts-themed residential community where students can immerse themselves in a living/learning program.

Goal 5

Strengthen individual cultural awareness and increase arts participation of university citizens, surrounding community members, and arts patrons.

Objective 1: Provide opportunities for social interactions and culturally based artistic expression for university students, employees, surrounding community members, and arts patrons.

Objective 2: Strengthen cultural understanding and interchanges for students and faculty.

Resolution to Approve B.S. in Microbiology

Documents included:

1. Resolution to Approve a B.S. in Microbiology
2. B.S. in Microbiology Degree Proposal
3. Dean Lay Nam Chang – Introductory Presentation
4. Professors Stevens and Popham – Degree Presentation

RESOLUTION TO APPROVE THE BACHELOR OF SCIENCE DEGREE IN MICROBIOLOGY

WHEREAS, Microbiology, a Science, Technology, Engineering, Mathematics, and Health (STEM-) discipline, is the study of the most abundant and pervasive organisms on earth, which play important roles in every biome and in most aspects of human health and industry; and

WHEREAS, microbiology is integral to the prevention and cure of human and animal infectious disease, to the improvement of agricultural yields, to the preservation of food products, to the elimination of waste products and protection of the environment, to the understanding and manipulation of global elemental cycles, and to the development of biofuels; and

WHEREAS, the Department of Biological Sciences is in an excellent position to initiate a bachelor of science in microbiology, due to its strong base of senior faculty who are actively engaged in microbiology research and the broad microbiology option curriculum currently offered to students in this field; and

WHEREAS, the bachelor of science in microbiology will provide students with the base of knowledge in the theoretical aspects and experimental tools and techniques in microbiology, and

WHEREAS, the bachelor of science in microbiology will prepare graduates for interdisciplinary research and education, for employment in the private sector, state and federal government agencies, and for post-baccalaureate training, and

WHEREAS, the undergraduate degree in microbiology is unique in the Commonwealth of Virginia and will establish Virginia Tech and the Commonwealth as leaders in education in this field that affects all areas of human endeavor;

NOW, THEREFORE BE IT RESOLVED, that the bachelor of science degree in microbiology be approved effective spring 2015 and the proposal forwarded the State Council of Higher Education for Virginia (SCHEV) for approval, and to the Southern Association of Colleges and Schools – Commission on Colleges (SACS-COC) for notification.

RECOMMENDATION:

That the resolution to approve the bachelor of science degree in microbiology be approved.

March 24, 2014

Virginia Tech Degree Proposal
Bachelor of Science in Microbiology
(CIP: 26.0502)

Type of degree action (circle one): ☒ New ☐ Spinoff ☐ Revision ☐ Discontinuance

Program description

The Department of Biological Sciences in the College of Science at Virginia Tech is proposing a new Bachelor of Science (B.S.) degree in Microbiology to be implemented in Spring 2015. Virginia Tech is in a unique position to immediately provide the necessary curriculum for a Microbiology major/degree.

Knowledge and research in microbiology is critical to myriad aspects of our everyday life, with particular impacts on human health, industry and technology, and our interactions with our environment. Due to the presence and participation of microbes in virtually every environment, biological process, and ecological structure, individuals with advanced microbiology knowledge are recruited into the broadest range of health, industrial, and environmental activities. Microbes play key roles in both deterioration and maintenance of human and animal health, in the preservation and degradation of food, in the generation of biofuels, and in maintenance of the earth's environment and climate. Individuals with a B.S. in Microbiology are prepared to enter the job markets associated with all of these issues and to enter professional and graduate schools.

Peer institutions in several other states have offered a B.S. in Microbiology for many years, and these programs have been highly successful in attracting students and producing successful graduates. Virginia Tech is the *only* institution of higher learning in the Commonwealth of Virginia that currently has an undergraduate Microbiology option. Any other institution would require significant resources and curriculum development in order to produce a comparable program. We are now proposing conversion of the Microbiology option to a formal degree in Microbiology. This change will:

- increase the visibility of the curriculum to potential students and their parents and thereby enhance recruitment of students interested in STEM and STEM-H.
- enable potential employers to understand the significant level of specialized training received by students in this program; many employers do not fully understand the significance of an "option" and ask for a degree in microbiology in employment ads. Creation of a degree in Microbiology will promote and enhance university-industry collaboration.
- permit formal recognition of specialized coursework on the diploma rather than only on the transcript, which is a point of confusion and angst to students and parents.

Curriculum summary

The B.S. Microbiology curriculum comprises 120 credits, including all requirements for the Curriculum for Liberal Education (38 credits), entry-level science and math courses (28 credits), common core courses (28-29 credits), restrictive electives (9-12 credits) and free electives (13-17 credits).

Entry-level science and math courses include Biology Orientation Seminar, General Chemistry lectures and labs, Organic Chemistry lectures and lab, General Physics lectures and labs, and Biological Statistics.

Common core courses include General Microbiology and its associated laboratory which serve as the gateway courses into the major with students coming from the new General Biosciences entry program, the traditional Biological Sciences major or University Studies programs, or transfer students from other institutes. Upon successful completion of General Microbiology and its laboratory with a grade of C or better students will be permitted to begin taking upper-level courses in microbiology. Two other sophomore-level courses will be required, Cell & Molecular Biology and Genetics, which will provide additional preparatory background education. All majors will be required to take Microbial Genetics, Microbial Physiology, and Biochemistry for Biotechnology in which they will learn many of the essential concepts of the curriculum. The students will then take either Microbial Molecular Genetics & Physiology Lab or Molecular Biology and its associated lab so that they begin to develop more advanced laboratory skills. To gain training in human-health relevant topics students will be required to take either Pathogenic Bacteriology and its lab or Immunology and its lab. Students will also be required to take Microbiology Senior Seminar to get career-advancement training separate from their individual academic advising.

Restricted elective courses will be selected by students from a list, two of which must have a laboratory experience. Thus by the time they complete the Microbiology degree, students will have completed five required upper-level laboratory courses giving them a marketable skill set and practice in analyzing their experimental data and presenting it in oral and written media. Working with their academic advisors, they will customize their degree program to prepare them for their specific career objectives by enabling them to focus on sub-discipline areas within the broader field of microbiology. A summary of the curriculum follows:

- Curriculum for Liberal Education requirements (38 credits):
 - Area I: Writing and Discourse (6 credits)
 - ENGL 1105 First-Year Writing (3)
 - ENGL 1106 First-Year Writing (3)
 - Area II: Ideas, Cultural Traditions and Values (6 credits)
 - Area III: Society and Human Behavior (6 credits)
 - Area IV: Scientific Reasoning and Discovery (8 credits-completed with Microbiology degree)
 - BIOL 1105 Principles of Biology (3)
 - BIOL 1115 Biological Principles Lab (1)
 - BIOL 1106 Principles of Biology (3)
 - BIOL 1116 Biological Principles Lab (1)
 - Area V: Quantitative and Symbolic Reasoning (6 credits-completed with Microbiology degree)
 - MATH 1016 Elem Calculus w/Trig (3)
 - MATH 2015 Elem Calculus w/Trig (3)

Area VI: Creativity and Aesthetic Experience (3 credits)

Area VII: Critical Issues in a Global Context (3 credits)

- Core Science and Math requirements (28 credits)

BIOL 1004 Biology Orientation Seminar (1)

CHEM 1035 General Chemistry (3)

CHEM 1045 General Chemistry Lab (1)

CHEM 1036 General Chemistry (3)

CHEM 1046 General Chemistry Lab (1)

CHEM 2535 Organic Chemistry (3)

CHEM 2545 Organic Chemistry Lab (1)

CHEM 2536 Organic Chemistry (3)

CHEM 2546 Organic Chemistry Lab (1)

PHYS 2205 General Physics (3)

PHYS 2215 General Physics Lab (1)

PHYS 2206 General Physics (3)

PHYS 2216 General Physics Lab (1)

STAT 3615 Biological Statistics (3)

- Core Microbiology requirements (28-29 credits):

BIOL 2604 General Microbiology (3)

BIOL 2614 General Microbiology Lab (1)

BIOL 2004 Genetics (3)

BIOL 2104 Cell & Molecular Biology (3)

BIOL 4624 Microbial Genetics (3)

BIOL 4634 Microbial Physiology (3)

BCHM 3114 Biochemistry for Biotechnology (3)

BIOL 4764 Microbiology Senior Seminar (2)

BIOL 4644 Microbial Molecular Genetics and Physiology Lab (3)

OR

BIOL 3774 Molecular Biology (3) and BIOL 3104 Cell & Molecular Biol. Lab (1)

BIOL 4674 Pathogenic Bacteriology (3) and BIOL 4724 Pathogenic Bacteriol. Lab (1)

OR

BIOL 4704 Immunology (3) and BIOL 4714 Immunology Lab (1)

- Restricted elective courses (9-12 credits):

Three of the following (**two** must include lab):

BIOL/CEE/CEES/ENSC 4164 Environmental Microbiology (includes lab) (3)

BIOL 3454 Introductory Parasitology (includes lab) (4)

BIOL 4075 Bioinformatics Methods (includes lab) (3)

BIOL/FST 4604 Food Microbiology (includes lab) (4)

BIOL 4644 Microbial Molecular Genetics and Physiology Lab (3) (if not taken above)

BIOL 4664 Virology (3)

BIOL 4674 Pathogenic Bacteriology (3) with or without BIOL 4724 Pathogenic Bacteriol. Lab (1) (if not taken above)
 BIOL 4704 Immunology (3) with or without BIOL 4714 Immunology Lab (1) (if not taken above)
 BIOL 4734 Inflammation Biology (3)
 BIOL 4804 Prokaryotic Diversity (3)
 BIOL 4xxx Research Methods in Molecular Biology (includes lab) (3)
 BIOL 4994 Undergraduate Research (includes lab) (total 4 credits over two semesters)
 FST 4634 Epidemiology of Foodborne and Waterborne Diseases
 PPWS 4114 Microbe Forensics/Biosecurity (3)

- Free Electives (13-17 credits):

Relevance to university mission and strategic planning

Virginia Tech is a public land-grant university serving the Commonwealth of Virginia, the nation, and the world community. The discovery and dissemination of new knowledge are central to its mission. Through its focus on teaching and learning, research and discovery, and outreach and engagement, the university creates, conveys, and applies knowledge to expand personal growth and opportunity, advance social and community development, foster economic competitiveness, and improve the quality of life. The proposed B.S. in Microbiology degree supports this internal vision for higher education by creating a signature educational experience at Virginia Tech. A Microbiology degree will provide relevant and significant training for students to enter a range of STEM and STEM-H careers, either directly following graduation or ultimately following further education. The laboratory-rich, hands-on experiences that Microbiology degree students receive will make them attractive to employers in Virginia and elsewhere.

Justification for the proposed program

Driven by human health issues such as re-emerging and newly emerging infectious agents and demand for renewable resources to create global sustainability, the field of microbiology is again in the spotlight.

“The need for qualified microbiologists continues to grow, both for basic research and practical applications. Many microbes have yet to be discovered. In addition, microbiologists are still studying how the known microbes function. As a result, the field of microbiology has virtually unlimited potential. Microbiologists are needed across many industries, including in academic, technology, industrial and environmental organizations” (<http://microbes.org/microbiology-careers>).

The importance of training in microbiology is reflected directly in the role of microbes in virtually all areas of the human experience. To put it simply, microbes are present and active in every environment we deal with, from forests, lakes, and farms to the relative “sterility” of a hospital ward and the complex microbiome that is within our own intestinal tract. Despite the fact that they are mostly invisible to simple human observation, microbes are the most abundant life forms on earth in terms of species diversity as well as total

mass. Our understanding of microbes contributes to almost all fields of scientific and technological endeavor.

Recent research trends in the biological sciences have increasingly and properly required collaborative efforts across multiple fields such as microbiology, molecular biology, environmental sciences, ecology, and computational biology. Broader interactions of biologists with engineers and physical scientists are key to utilizing biological systems to solve emerging technical challenges. The bellwether 2009 report from the National Academy of Sciences entitled *A New Biology for the 21st Century* states, “The New Biology depends on interdisciplinary collaborations among scientists and engineers who share sufficient common language and understanding to envision and embrace common goals.” (http://www.nap.edu/openbook.php?record_id=12764&page=73)

Of particular relevance to this proposal is that the suggested solutions to ALL of these societal challenges are deeply rooted in the understanding and application of microbes and microbial-driven processes. Microbiologists are critical in providing the detailed knowledge of microbial populations and capabilities to move technological solutions forward. Undergraduate students with basic microbiology training will have myriad opportunities to enter into developing fields of great importance for Virginia, the United States, and the entire world population.

A major factor in current and future technological advances will be our ability to understand the genetic basis of microbial processes. The *New Biology* report says, “Harnessing the molecular biology and biochemistry of microbes, either in pure culture under laboratory conditions or in naturally occurring complex communities, promises to contribute significantly to addressing all four challenges presented in this report. Microbial communities support the growth of plants, affect human health, are critical components of all ecosystems, and can be engineered to produce fuels.” (http://www.nap.edu/openbook.php?record_id=12764&page=50).

With regard to **food production**, the *New Biology* report discusses the importance of microbes in the cultivation of food crops. “Furthermore, complex microbial communities in the soil, previously difficult to study, play critical roles in providing nutrients and protecting plants from pests and diseases. Understanding these microbial communities in predictive detail will also point to new ways to increase plant productivity.” (http://www.nap.edu/openbook.php?record_id=12764&page=24).

With regard to the **environment**, the *New Biology* report states, “microbes have a fundamental impact on the biogeochemical cycles of the planet and on the health of all its inhabitants” (http://www.nap.edu/openbook.php?record_id=12764&page=49). They are responsible for the majority of the flux of the elemental cycles on earth (eg: carbon and nitrogen cycles). Some steps in these cycles, such as nitrogen fixation, are ONLY carried out naturally by microbes, and they do these things using only renewable energy resources.

With regard to **energy**, the *New Biology* report discusses the importance of microbes in the generation of biofuels (http://www.nap.edu/openbook.php?record_id=12764&page=31). They say, “efforts to discover, characterize, and engineer microbes so that they serve as factories for high production rates, with efforts to engineer production systems that maximize those microbes’ productivity... will allow next-generation biofuels to compete with gasoline at prevailing prices,” and “An integrated approach that includes scientists and engineers expert at each step is

essential. The combined efforts of plant scientists, microbiologists, ecologists, chemical and industrial process engineers, molecular biologists, geneticists, and many others are needed to develop and optimize the biomass-to-biofuel system.”

With regard to **human health**, the *New Biology* report discusses the importance of microbes in human health (http://www.nap.edu/openbook.php?record_id=12764&page=33). “Humans are intimately associated with a complex microbial community—the microbiome. Rapidly accumulating discoveries of the many essential roles of this microbial consortium are redefining our understanding of human health and making it clear that a true understanding of human health must take into account not only the human genome, but also the genomes of each human’s microbial community. Understanding the role of microbes and viruses in human health is a major challenge, but it also holds the promise of providing new intervention points for prevention, diagnosis, and treatment of disease.”

To become a microbiologist, a person needs to complete a bachelor's degree program in microbiology. These programs introduce students to concepts in bioinformatics, virology and immunology. Microbiology students also take laboratory courses to see first hand how microorganisms react to different stimuli and behave in different environments. A goal of the proposed Microbiology degree program is to provide undergraduate students not only with specialized knowledge of microbes, but also with the broad training required to form productive interactions within collaborative groups. The available coursework in environmental systems, host-pathogen interactions, bioinformatics, and epidemiology are examples of this breadth.

Currently the state of Virginia does not have an institute of higher learning that offers a B.S. degree in Microbiology. Now is the time to provide this degree opportunity to our citizens and provide qualified employees to our businesses and advanced students for professional programs.

Student Demand

Over the past three years (2011-2013) since Microbiology option students have specifically been tracked, an average of 30 students per year have completed the Microbiology Option within the Biological Sciences degree. It is expected that all of these students would enter a new Microbiology degree. The increased visibility of a Microbiology degree program is expected to draw additional student enrollment, including in-state students that might otherwise choose an out-of-state institution that offers a Microbiology degree and out-of-state students specifically attracted to this degree program.

Moreover, a summary of enrollment numbers in microbiology-related courses for the past three years is presented in the table below. Enrollment in General Microbiology (BIOL 2604) is always large and represents students from a variety of Virginia Tech colleges and majors. Students expected to enroll in the Microbiology degree are those that continue into the required advanced core courses of the degree, BIOL 4624 and BIOL 4634.

Annual Enrollments in Virginia Tech Core Microbiology Courses

Course	Annual Enrollment		
	2010-2011	2011-2012	2012-2013
BIOL 2604: General Microbiology	747	929	>903
BIOL 4624: Microbial Genetics	48	81	58
BIOL 4634: Microbial Physiology	59	61	63
BIOL 4674: Pathogenic Bacteriology	107	114	116
BIOL 4724: Pathogenic Bacteriology Lab	95	95	75
BIOL 4704: Immunology	106	105	103

Given this consistent interest, we predict an ongoing enrollment of 120 students in this degree program, with 30 graduates/year.

Employment Demand

Graduates from the Microbiology degree program will be qualified for technical laboratory positions in a wide variety of industries. These include the production of pharmaceuticals; fermented food products; microbial and enzymatic additives for industrial, agricultural, and consumer markets; and the conversion of potential fuel sources to readily useable energy. Microbiology technicians are employed for monitoring safety in food production, water purification, wastewater treatment, and clinical settings. Several emerging industries are highly dependent on microbiological expertise, and employment in these fields will be growing.

The U.S. Bureau of Labor Statistics expects a 13% increase in the number of jobs for microbiologists and a 14% increase in the number of jobs for biological technicians between 2010 and 2020, which is about the average for all jobs. New positions will appear in the pharmaceutical and environmental industries, in alternative energy and in agriculture. Microbiologists who understand both microbiology and related fields will have the best job opportunities (<http://work.chron.com/need-become-microbiologist-7907.html>). Graduates may work in the pharmaceutical, agricultural or food production industries ([http://education-portal.com/articles/Microbiologist Educational Requirements for a Career in Microbiology.html](http://education-portal.com/articles/Microbiologist_Educational_Requirements_for_a_Career_in_Microbiology.html)).

Resource Needs/Savings

All required and elective courses are already in place as part of the Microbiology option. Required core science and math courses are large introductory courses taught by full and part time faculty in several departments. As the majority of Microbiology majors will be derived from current Biological Sciences majors, the program will not impart a significant additional load on any of these courses.

Required core microbiology courses are taught by full-time faculty and part-time instructors in the Biological Sciences department and one full-time faculty member in Biochemistry. Support for many of the microbiology laboratory classes are provided by two full-time classified staff members in the department of Biological Sciences. For courses in the Microbiology curriculum, faculty replacements will be needed in Biological Sciences and other departments as individuals teaching key classes retire. If enrollment numbers increase dramatically, then additional faculty and graduate teaching assistants may be needed to teach classes (e.g., Pathogenic Bacteriology & lab and Immunology & lab) popular not just with Microbiology students, but with other life sciences majors as well. New Biological Sciences hires in the areas of Environmental Microbiology and Eukaryotic Microbiology would broaden the elective options available to students, as well as provide additional mentors for students interested in undergraduate research. These types of faculty hires are within the Biological Sciences 5-year hiring plan currently under development. Continued College and University support for growth of the Biological Sciences tenure track faculty number towards a total of 50 will allow implementation of these plans.

In addition to faculty resources, it is critical that facilities and staff for laboratory instruction be maintained, and that implementation of lab fees continue so that students can receive extensive, state-of-the-art training in microbiology methods and technology.

RESOURCE	ESTIMATED COSTS (use NA if not applicable)
Faculty	NA
Administrative Staff	NA
Graduate Teaching/ Graduate Research Assistants	NA
Space	NA
Library	NA
Equipment	NA
Other	NA



College Of Science: Our Vision

*Lay Nam Chang, Dean
Virginia Tech Board of Visitors
March 24, 2014*

The College of Science

- College of Science is Virginia Tech's leader for meeting the nation's Science, Technology, Engineering, Mathematics, and Health (STEM-H) challenges
- Eight key departments reside in *Science: Biological Sciences, Chemistry, Economics, Geosciences, Mathematics, Physics, Psychology, and Statistics*
- We already provide much of the basic training, but rapid science evolution means goals and methodology need changing

Three Degree Proposals

Programs to emphasize teamwork, cognitive thinking, and interdisciplinarity:

- Microbiology - *Biological Sciences*
- Nanoscience – *Biological Sciences, Chemistry, Geosciences, Physics and others*
- Computational Modeling and Data Analytics (CMDA) – *Computer Science (College of Engineering), Mathematics, Statistics*

B.S. in Microbiology in the Dept. of Biological Sciences Virginia Tech

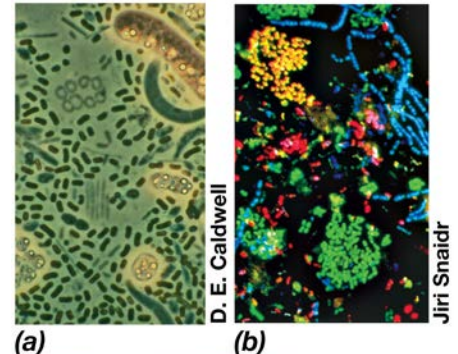
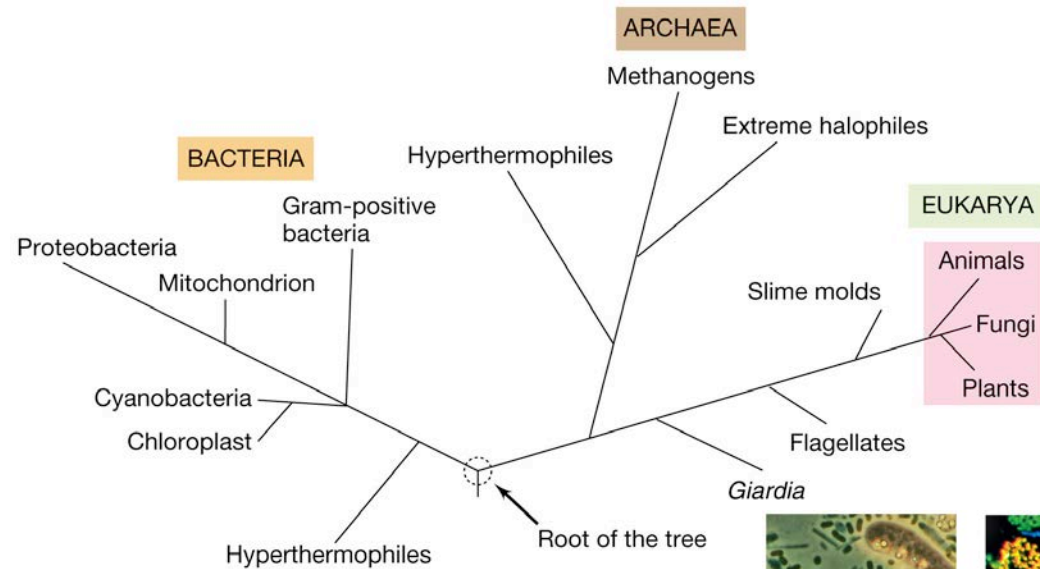


Dr. Ann M. Stevens
Dr. David L. Popham
BOV Meeting 3/24/14



Why are microbes important?

- Most numerous and diverse organisms on the planet
- Public health and safety; Emerging diseases
- Global sustainability and environmental conservation
- Model systems



D. E. Caldwell

Jiri Snajdr



Ricardo Guerrero

B.S. in Microbiology Curriculum Attachment B

Conversion of the current Microbiology Option managed
under the B.S. in Biological Sciences

Cross campus cooperation:

- Biological Sciences faculty teach core/required courses
- College of Agriculture and Life Sciences and VetMed faculty contribute some elective courses

Existing student demand: ~35 graduates per year in micro option
~120 projected annual enrollment

Cost: No new resources needed

Impact:

- The only B.S. Microbiology major/degree in Virginia
- New STEM-H degree (Governor's initiative)
- Enhanced visibility of program; Improved recruiting

B.S. in Microbiology-Career Paths

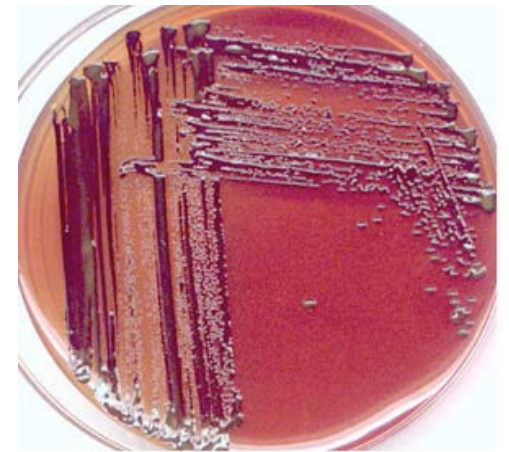
- A course curriculum designed to prepare students for:
 - Careers in Biotech industry
 - Graduate school in Micro/Immuno
- Also popular with students interested in:
 - Medical careers
 - Med/Dental/Vet/Pharm school
 - Master of Public Health/Epidemiology
 - Clinical laboratory science
 - Food safety/production
 - Forensics
 - Environmental sciences



Broad support from Virginia-based and regional biotechnology companies/organizations!

Attachment B

- Altria, Richmond
- American Biosystems Inc., Roanoke
- American Type Culture Collection, Manassas
- Dupont, Wilmington, Delaware
- Engineered Biopharmaceuticals, Danville
- Indoor Biotech, Charlottesville
- Jefferson College of Health Sciences, Roanoke
- Mediatech Corning, Manassas
- Novozymes, Salem
- Tech Lab, Blacksburg
- Techulon Blacksburg
- United States Dept. of the Navy, Dahlgren
- Virginia-BIO, statewide organization



Resolution to Approve B.S. in Nanoscience

Documents included:

1. Resolution to Approve a B.S. in Nanoscience
2. B.S. in Nanoscience Degree Proposal
3. Professor JP Morgan – Introductory Presentation
4. Professor Randy Heflin – Degree Presentation

RESOLUTION TO APPROVE THE BACHELOR OF SCIENCE DEGREE IN NANOSCIENCE

WHEREAS, nanoscience is a rapidly emerging field and encompasses areas within biological sciences, chemistry, geosciences and physics (disciplines that lie at the core of Science Technology Engineering and Mathematics (STEM) education); and

WHEREAS, nanoscience is an integral part of the discovery, development and delivery of new pharmaceutical compounds, is foundational to the discovery and the development of nanomaterials, is a key area in the discovery and development of new devices for the production, storage and delivery of energy, and plays a foundational role in modern information and communication technology; and

WHEREAS, the College of Science is in an excellent position to initiate a bachelor of science in nanoscience, due to its strong base of senior faculty who are actively engaged in research at the nanoscale, in addition to 15 faculty members hired in this area since 2004 with particular strengths in novel nanomaterials and devices, nanomedicine, and environmental nanoscience; and

WHEREAS, the bachelor of science in nanoscience will provide students with the base of knowledge in the theoretical aspects and experimental tools and techniques in nanoscience; and

WHEREAS, the bachelor of science in nanoscience will prepare graduates for interdisciplinary research and education, with employment in the private sector, employment in state and federal government agencies, and for post-baccalaureate training; and

WHEREAS, the undergraduate degree in nanoscience is unique in the Commonwealth of Virginia, and will join four other nanoscience/nanotechnology undergraduate degree programs in the United States, and will establish Virginia Tech and the Commonwealth as key leaders in education for one of the most critical technologies of the future;

NOW, THEREFORE BE IT RESOLVED, that the bachelor of science in nanoscience be approved effective spring 2015 and the proposal forwarded the State Council of Higher Education for Virginia (SCHEV) for approval, and to the Southern Association of Colleges and Schools – Commission on Colleges (SACS-COC) for notification.

RECOMMENDATION:

That the resolution to approve the bachelor of science degree in nanoscience be approved.

March 24, 2014

Virginia Tech Degree Proposal
Bachelor of Science (B.S.) Nanoscience
(CIP: 40.9999)

Type of degree action (circle one): ☒ New ☐ Spinoff ☐ Revision ☐ Discontinuance

Program description

The College of Science at Virginia Tech is proposing a new Bachelor of Science (B.S.) in Nanoscience degree, to commence in Spring 2015. This will be one of only a few such degree programs worldwide. Nanoscience and nanotechnology lie at the very foundation of our world. A nanometer is simply a billionth of a meter, and a typical atom is about 1/10th of a nanometer in size. At this length scale, atoms and molecules follow the laws of quantum physics, and the processes of life (DNA and proteins are naturally-occurring nanoscale materials, for example) and the properties of materials emerge. Due to a combination of profound theoretical insights, advances in scientific instrumentation, and massive computing power, we are now capable of imaging and steering single atoms with unprecedented precision, opening a window towards a world in which materials, chemical compounds, devices, and even small organisms can be built atom by atom and molecule by molecule, tailored towards desired properties and applications.

Already, modern information and communications technology, the discovery and delivery of new drugs, and our energy supply are critically dependent on nanoscale phenomena. Public and private partners have recognized the need for continued innovation in this critical field. In 2000, the Clinton administration launched the *National Nanotechnology Initiative* (NNI, <http://www.nano.gov>), which prioritizes and coordinates the nanoscience and nanotechnology research and development efforts of 25 federal agencies. The cumulative investment in this initiative now stands at \$18 billion. In response, several leading universities have started graduate programs in nanoscience and technology. However, *undergraduate* degree programs in this field are still very rare with four B.S. programs in nanoengineering and one in nanoscience, even though strong interest and demand, both from students and employers, can be documented. Virginia Tech, and especially the College of Science, is in an excellent position to initiate such an undergraduate program, thanks to a strong base of senior faculty who are actively engaged in research at the nanoscale. In addition to this senior base, the College of Science established Nanoscale Science as a key Cluster area for faculty hiring, with fifteen faculty members hired in this area since 2004. Particular strengths include novel nanomaterials and devices, nanomedicine, and environmental nanoscience. *We are presented with a unique opportunity to become one of the first and leading institutions in undergraduate education in the field of nanoscience.*

Curriculum summary

The B.S. in Nanoscience at Virginia Tech is designed to provide a strong background in the theoretical aspects as well as experimental tools and techniques of nanoscience with an additional key requirement of completion of eight hours of

undergraduate research. The undergraduate research component ensures that students will have direct exposure to the frontier of nanoscience research and be competent in advancing that frontier. An additional crucial component of the degree program is a sequence of seminar courses that gradually introduce the students to the research frontier. This is accomplished first through a series of guest lectures by researchers (Nanoscience Research Seminar), followed by a set of research laboratory rotations (Nanoscience Research Rotations), and completed by a course on scientific dissemination skills (Professional Dissemination of Nanoscience Research). This focus on research skills will yield students who are excellently prepared for directly entering the workforce with their B.S. degree as well as for pursuit of a graduate degree. A total of eleven new courses (thirty-two credits) have been developed for the degree program, five of which have been taught as a pilot course at least once as of Spring 2013. As nanoscience is by its very nature a highly interdisciplinary field, the students will be required to have a good foundation in biology, chemistry, mathematics, and physics. They will develop additional skills in these disciplines, as well as geosciences, through the specific courses of the nanoscience degree itself.

As there are currently few undergraduate degree programs in nanoscience and nanotechnology, we will for the first several years strongly encourage the students to carry out a minor degree with their Nanoscience major, preferably in biology, chemistry, geosciences, or physics. As Virginia Tech and the Commonwealth will be at the vanguard through creation of the B.S. in Nanoscience, it will be valuable for the students to have a component of their degree with which employers and graduate programs are quite familiar. Furthermore, the training in a more traditional discipline combined with the interdisciplinary breadth of the Nanoscience degree will be an especially powerful combination for our graduates and will position them for the highest levels of success in their employment and/or graduate education. As undergraduate degree programs in nanoscience and nanotechnology proliferate, and as employers and graduate programs learn what to expect from and appreciate the value of students with a B.S. in Nanoscience from Virginia Tech, we will not as strongly advocate that all students in the program carry out the additional minor, though we will continue to educate the students on the power and added value of doing so. The program is designed for a compatibility with completion of the Nanoscience major / traditional science minor in four years.

The B.S. in Nanoscience comprises 120 credits, distributed among the following categories of courses:

I. Curriculum for Liberal Education (38 credits)

Area 1: Writing and Discourse (6 credits)

Area 2: Ideas, Cultural Traditions, and Values (6 credits)

Area 3: Society and Human Behavior (6 credits)

Area 4: Scientific Reasoning and Discovery (8 credits - Physics 2305-2306)

Area 5: Quantitative and Symbolic Reasoning (6 credits - Math 1205-1206)

Area 6: Creativity and Aesthetic Experience (3 credits)

Area 7: Critical Issues in a Global Context (3 credits)

II. Nanoscience Core Courses (40 credits)

NANO 1015 - Introduction to Nanoscience* (3 credits)
NANO 1016 - Introduction to Nanoscience* (3 credits)
NANO 2024 - Quantum Physics of Nanostructures* (4 credits)
NANO 2114 - Nanoscience Research Seminar* (1 credit)
NANO 2124 - Nanoscience Research Rotations* (2 credits)
NANO 3015 - Nanoscale Synthesis, Fabrication, and Characterization* (4 credits)
NANO 3016 - Nanoscale Synthesis, Fabrication, and Characterization* (4 credits)
NANO 3114 - Professional Dissemination of Nanoscience Research* (1 credit)
NANO 3124 - Nanoscience and the Environment* (3 credits)
NANO 4124 - Advanced Nanomaterials and Devices* (3 credits)
NANO 4314 - Nanomedicine* (4 credits)
NANO 4994 - Undergraduate Research (8 credits)
(* indicates new course developed for this degree program)

III. Math/Science Required Courses (18 credits)

CHEM 1035/1045 - General Chemistry (4 credits)
CHEM 1036/1046 - General Chemistry (4 credits)
CHEM 2514 - Survey of Organic Chemistry (3 credits)
MATH 1114 - Linear Algebra (2 credits)
MATH 2214 - Differential Equations (3 credits)
BIOL 2124 - Cell and Molecular Biology for Engineers (2 credits)
(Note: Two semesters each of Introductory Physics and Calculus are also required and satisfy the Curriculum for Liberal Education requirements above.)

IV. Free Electives (24 credits)

As an alternative entry point to the degree program, students can participate in the Integrated Science Curriculum rather than traditional introductory courses in science. The ISC is an 8-hour classroom/laboratory experience for a total of four semesters. These 32 credit hours are a direct substitution for the 32 hours of BIOL 1105/1106/1115/1116, CHEM 1035/1036/1045/1046, MATH 1114/1205/1206, and PHYS 2305/2306 listed above.

Relevance to university mission and strategic planning

The development of the B.S. in Nanoscience degree is especially well-matched to the mission of Virginia Tech to create and disseminate new knowledge and prepare our students to be leaders in their fields. The program will establish Virginia Tech and the Commonwealth as key leaders in education for one of the most critical technologies of the future. The program ties in with a major research focus area for the College of Science and the university, and it involves undergraduate students in those research efforts that are creating new knowledge in the area of nanoscience. Such discoveries in nanoscience will enable the enhancement of current technologies and the creation of new ones that will benefit the Commonwealth, the

nation, and the globe in essential areas such as medicine, energy, communications, and sustainability.

Through its involvement of students in laboratory experiences and exposure to nanoscience research at Virginia Tech beginning in the sophomore year and continuing through the end of the degree, the Nanoscience degree program exemplifies the "hands-on, minds-on" model of education called for in the Virginia Tech strategic plan *A Plan for a New Horizon: Envisioning Virginia Tech 2012-2018* (<http://www.president.vt.edu/strategic-plan/strategic-plan.html>). Furthermore, the strategic plan identifies science, technology, engineering, mathematics and health sciences (STEM-H) as a key focus area of education, which is clearly well-aligned with development of the Nanoscience degree. The strategic plan also states that the university will leverage existing and emerging strengths in areas such as energy, materials, ecosystems, and environmental quality along with increased focus on the health sciences, all of which are impacted by nanoscience education and research.

Justification for the proposed program

The World Technology Evaluation Center, Inc. (WTEC) is the nation's leading organization in conducting international technology assessments, and an expert review reported that US public awareness of nanotechnology is low (~30%), despite the fact that most US citizens own or operate a device that is enabled with nanoscience and nanoscale components, *e.g.* smart phones. Moreover, nanotechnology is viewed as the next general purpose technology with nanostructures as safer, more efficient substitutes for commonly used compounds, and nanoscience and nanotechnology will infiltrate virtually every aspect of human existence in modern societies around the world. The globalization of nanoscience is evident in the level of funding across the globe, ensuring opportunities in the international workforce and opportunities for undergraduates to study abroad in the undergraduate curriculum. Thus, an undergraduate degree in nanoscience is critical to educate students (and the public at large) in the unique nanoscale elements of self-assembly in chemistry, quantum mechanics in physics, nanoscale confinement in biology, and treating large data sets with statistics and mathematics where traditional theories, physical property measurements, and design strategies no longer function. Undergraduates must understand sustainable practices, impacts on humans and the environment, and full life cycle assessment of nanostructures and their elemental constituents. Education at the undergraduate level with a degree that clearly navigates our students is vital for training students with sensitivity to these societal learning outcomes prior to joining a burgeoning industrial workforce. A few other universities have begun to answer the national call for an educated undergraduate in nanoscience and nanotechnology as described in the Program Overview section. Virginia Tech will be the first university in the Commonwealth to offer a B.S. degree in Nanoscience, and only the second in the United States, although we expect that the number of dedicated programs like these will start to increase rapidly.

There is a clear need to have students trained at the undergraduate level with a firm foundation of nanoscience that are capable of understanding, designing, and manipulating nanostructures at these increasingly complex levels. The graduates of such a program will be exceedingly well-prepared for working for nanotechnology companies and for graduate school. We no longer can effectively educate undergraduates in nanoscience with a complicated maze of courses. We must provide a clear degree path, and we must nurture thinking and teaming in transdisciplinary domains that are unique to the field of nanoscience.

Student Demand

The College of Science at Virginia Tech held a NanoCamp for upper-level high school students on August 4-5, 2012. Registration for the event rapidly reached its maximum capacity and was attended by 41 students. A variety of faculty and graduate students introduced the participants to the concepts and tools of nanoscience through presentations, demonstrations, laboratory tours, and hands-on exercises. The program was an overwhelming success and will be continued each summer for the foreseeable future. The enrollment in NanoCamp is one indicator of potential student interest in nanoscience. We polled the NanoCamp participants electronically in February, 2013 to determine their interest in enrolling in our proposed Nanoscience degree program. We received a quite limited response from these high school students despite a follow-up request to them and a request to their parents to encourage student response to the poll. Nonetheless, of the seven students who responded to the question *"Virginia Tech is considering creating an undergraduate degree program in Nanoscience. How likely would you be to enroll in a B.S. in Nanoscience program at Virginia Tech?"* one student (14%) responded *"definitely"*, two (29%) responded *"highly likely,"* and three (43%) responded *"somewhat likely."*

We also surveyed students at Virginia Tech enrolled in the calculus and non-calculus based introductory physics courses in February, 2013. All science and engineering students are required to take one or the other of these two courses, so it was considered to be a good proxy for the types of students who might be most interested in such a program. We received a reasonably good response to the poll with 452 responses from the approximately 2000 students enrolled in the courses at the time. The questions were phrased slightly differently than for the high school students as *"Virginia Tech is considering creating an undergraduate degree program in Nanoscience. How likely would you have been to enroll in a B.S. in Nanoscience program at Virginia Tech if it had been available when you were a freshman?"* Of those respondents, 21 (5%) responded *"definitely,"* 49 (11%) responded *"highly likely,"* and 147 (33%) responded *"somewhat likely."* These numbers suggest that it should be quite reasonable to meet our enrollment goals.

Market Demand

At the request of the National Science and Technology Council (NSTC) (through a subcommittee on Nanoscale Science, Engineering, and Technology: NSET), a workshop from September 28-29, 2000 by the National Science Foundation was

organized. The opinions of leading experts from academia, the private sector and government were discussed during the workshop. NSTC, which is the principal means for the U.S. President to coordinate science, space and technology policies across the Federal Government, reported:

“Advances in nanoscience and nanotechnology promise to have major implications for health, wealth, and peace in the upcoming decades. Knowledge in this field is growing worldwide, leading to fundamental scientific advances. In turn, this will lead to dramatic changes in the ways that materials, devices, and systems are understood and created. The National Nanotechnology Initiative (NNI) seeks to accelerate that progress and to facilitate its incorporation into beneficial technologies. Among the expected breakthroughs are orders-of-magnitude increases in computer efficiency, human organ restoration using engineered tissue, “designer” materials created from directed assembly of atoms and molecules, and the emergence of entirely new phenomena in chemistry and physics”.

Nanoscience and nanotechnology are interdisciplinary research and educational areas. Therefore careers exist in a vast array of disciplines. The National Nanotechnology Infrastructure Network has identified the following career areas:

- Electronics/semiconductor industry
- Materials science including textiles, polymers, packaging, among others
- Auto and aerospace industries
- Sports equipment
- Pharmaceuticals including drug delivery, cosmetics, among others
- Biotechnology
- Medical fields
- Optoelectronics
- Environmental monitoring and control
- Food science including quality control and packaging
- Forensics
- University and federal lab research
- National security and Military
- Energy capture, storage, & use; fuel cells, batteries

Resource Needs/Savings

The B.S. in Nanoscience degree program will be administratively situated within the Dean’s office of the College of Science at Virginia Tech. Courses will be taught by existing faculty members from the Departments of Biological Sciences, Chemistry, Geosciences, and Physics. Established faculty from each of these departments have participated in the development of this new degree program and have active research programs in the field of nanoscience.

Two graduate teaching assistants (GTAs) will adequately cover the laboratory courses throughout the curriculum.

One part-time (50%) administrative assistant will be required to assist in coordination of the curriculum, student advising, student recruiting, programmatic assessment, and student undergraduate research and internship opportunities.

No additional library or telecommunication resources will be required for the program beyond those that already exist.

In terms of space and equipment, we will be using a synergistic combination of existing resources, including faculty research laboratories and nanoscale characterization facilities:

- The college has recently constructed three interdisciplinary and dynamic lab spaces, which will be shared in the initial stages of the program. This space is uniquely positioned within Biological Sciences and Geosciences, and adjacent to Physics and Chemistry for proximity.
- The laboratory space that is available to the Nanoscience students comprises chemical hoods, instrumentation, team bench spaces, cell culture facilities, and team data discussion spaces.
- Existing equipment includes electron and atomic force microscopy, surface analysis centers, X-ray characterization centers, and nanoscale fabrication facilities.
- The university has instituted a mechanism by which lab fees can be collected to help maintain equipment and supplies.
- As the program matures, the expectation is that the planned science research lab building will house these laboratory courses.

RESOURCE	ESTIMATED COSTS (use NA if not applicable)
Faculty	NA
Administrative Staff	\$24,500 (salary + fringe)
Graduate Teaching/ Graduate Research Assistants	\$43,200 (stipend + fringe); \$21,480 tuition costs
Space	NA
Library	NA
Equipment	NA
Other	NA

Academy of Integrated Science

**Virginia Tech Board of Visitors
Academic Affairs Committee
March 24, 2014**



Quote from a Canadian Philosopher

A good hockey player plays where the puck is.



**A GREAT HOCKEY PLAYER PLAYS WHERE
THE PUCK IS GOING TO BE.**

Wayne Gretzky

Education for the Future:

Multi-departmental Degrees and Programs

Being presented today:

- Computational Modeling and Data Analytics (CMDA)
- Nanoscience

In the near future:

- Neuroscience
- Systems Biology

Already under way:

- Science, Technology, and Law (minor)
- Integrated Science Curriculum (portal program)

The Academy is the administrative unit for these programs.

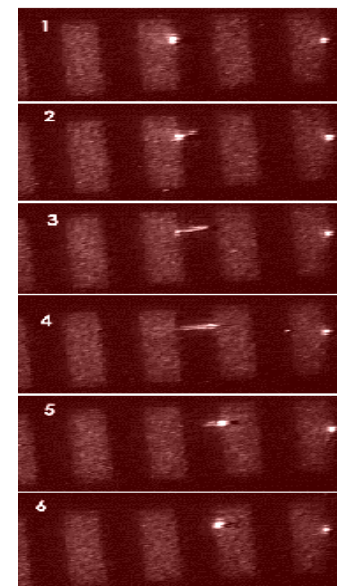
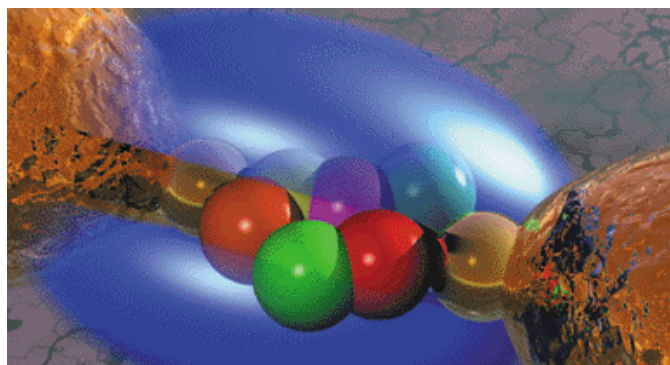
Functions of the Academy

- House and manage multi-departmental degree programs, minors, and the Integrated Science Curriculum
- Schedule classes and secure faculty to teach those classes
- Recruit and advise students
- Track student progress
- Evaluate program success and modify as needed
- Provide a “major home” for students (a focal point for their education, including clubs and other program related activities)
- Organize faculty for program support and development
- Provide an interdisciplinary home for associated faculty
- Enhance research in alignment with these new programs; foster collaboration across departmental lines



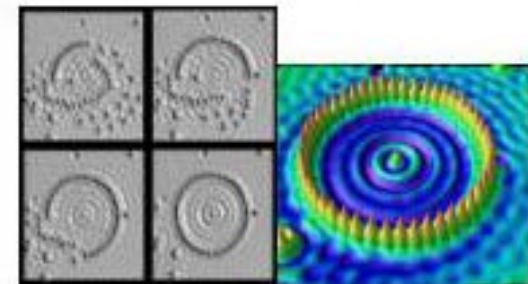
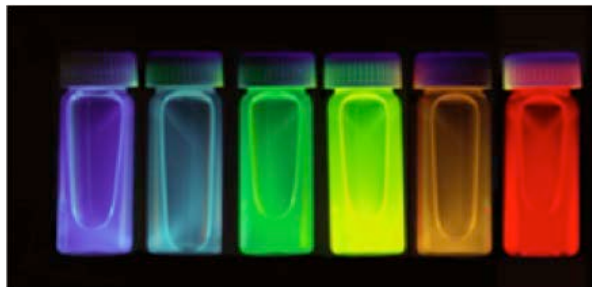
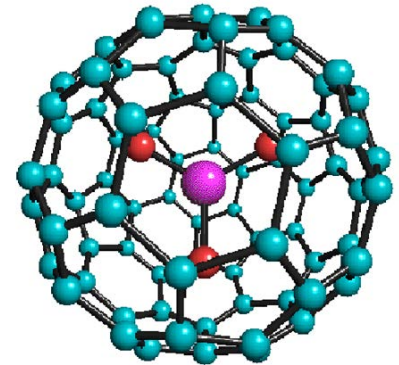
B.S. in Nanoscience Academy of Integrated Science College of Science

Prof. Randy Heflin
Department of Physics



What is Nanoscience?

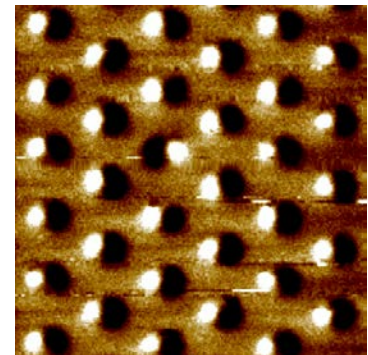
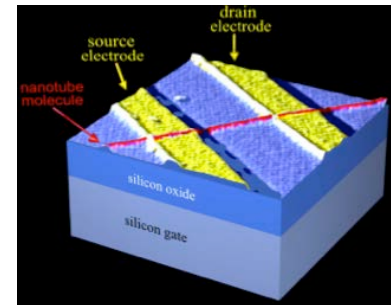
- Just as most engineering technologies build on fundamental scientific principles, nanoscience is the firm foundation of nanotechnology.
- Nanoscience and Nanotechnology refer to control of matter at the nanometer (one-billionth of a meter) length scale.
- 1 nm \sim 5-7 atoms side-by-side
- Degree program will focus on:
 - Synthesis of nanomaterials (e.g. fullerenes, nanotubes, quantum dots)
 - Fabrication of Nanostructures (e.g. electron beam lithography, nanoimprint lithography)
 - Characterization techniques of nanomaterials and nanostructures (e.g. scanning probe microscopy, diffuse light scattering)
 - Properties of nanomaterials (e.g. electronic and optical properties, environmental impact, nanomedicine)



Quantum corral of 48 iron atoms on copper surface
positioned one at a time with an STM tip
Conical diameter 14nm

Background

- National Nanotechnology Initiative has invested >\$19 billion through 20 federal agencies since 2000 (www.nano.gov).
- National Science Foundation estimates a market of \$3 trillion by 2020 for nanotechnology products with a U.S. workforce of 2 million.
- National Science and Technology Council (NSTC) reports : *“Advances in nanoscience and nanotechnology promise to have major implications for health, wealth, and peace in the upcoming decades...Among the expected breakthroughs are orders-of-magnitude increases in computer efficiency, human organ restoration using engineered tissue, “designer” materials created from directed assembly of atoms and molecules, and the emergence of entirely new phenomena in chemistry and physics”* and states that it is a national imperative to *“Educate and train a new generation of scientists and workers skilled in nanoscience and nanotechnology at all levels.”*
- National Nanotechnology Infrastructure Network identifies that nanoscience and nanotechnology will have major impact in career areas that include:
Electronics/semiconductor industry; Materials science including textiles, polymers, and packaging; Auto and aerospace industries; **Pharmaceuticals including drug delivery** and cosmetics; **Energy capture, storage, & use**; fuel cells, batteries; and Environmental monitoring and control.
- There currently exist only one B.S. in Nanoscience in the U.S. (SUNY-Albany) and three in Nanotechnology/Nanoengineering (SUNY-Albany, UC-San Diego, Louisiana Tech).
- Virginia Tech and the Commonwealth have the opportunity to be pioneers in nanoscience education.



Why Virginia Tech and the College of Science?

- Excellent alignment with hands-on/minds-on and STEM-H emphases of VT strategic plan.
 - Four lecture/laboratory courses
 - Lab rotations course (four weeks each in three different research labs)
 - 8 credits of undergraduate research (expected to result in journal publication and conference presentation)
- Senior Faculty Leadership with expertise in nanoscience education, leading large research projects, conference organization, administration, and commercialization.



- Prof. Mike Hochella (Geosciences)
- University Distinguished Professor
- VT PI of NSF Center for the Environmental Applications of Nanotechnology
- Director of ICTAS Center for Sustainable Nanotechnology



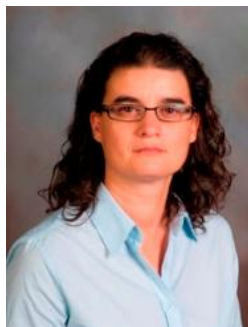
- Prof. Tim Long (Chemistry)
- Associate Dean for Research and International Outreach
- Co-Chair of 2012 World Polymer Congress (held on VT campus)
- Co-Leader of ICTAS Nano-Bio Interface Thrust



- Prof. Randy Heflin (Physics)
- Co-Editor of first undergraduate textbook "Introduction to Nanoscale Science and Engineering"
- Assoc. Editor of International Journal of Nanoscience
- Co-founder of Virginia nanoTech, LLC

Why Virginia Tech and the College of Science?

- Cluster Hiring in Nanoscience in COS has resulted in hiring of 15 faculty members since 2004. Those participating in Nanoscience degree program development include:



Carla Finkelstein
Biological Sciences



Tijana Grove
Chemistry



John Matson
Chemistry



Amanda Morris
Chemistry



Marc Michel
Geosciences



Giti Khodaparast
Physics



Vinh Nguyen
Physics



Kyungwha Park
Physics



Hans Robinson
Physics



Chenggang Tao
Physics

Student Interest

- In August 2012, the College of Science held a two-day NanoCamp that was attended by 41 high school students.
- In February 2013, we surveyed all students in introductory physics at Virginia Tech with the question: *"Virginia Tech is considering creating an undergraduate degree program in Nanoscience. **How likely would you have been to enroll in a B.S. in Nanoscience** program at Virginia Tech if it had been available when you were a freshman?"* **21 (5%) responded "definitely," 49 (11%) responded "highly likely,"** and 147 (33%) responded "somewhat likely."
- As of Spring 2014, we have offered all but one of the eleven new courses that comprise the proposed degree program.

Nano 1015: 42 students (Fall 2013)

Nano 1016: 25 students (Spring 2014)

Winter Session Course on *International Perspectives on the Nanoscience of Macromolecules*: 20 students (January 2014 in France, Germany, and Switzerland)

The students in 1016, 2114, and 3015 have all stated an interest in declaring a major in Nanoscience upon approval. We expect high enrollment, including many elite students from both Virginia and around the nation, when the degree program is approved and we are able to advertise it.

Resolution to Approve B.S. in Computational Modeling and Data Analytics

Documents included:

1. Resolution to Approve a B.S. in Computational Modeling and Data Analytics (CMDA)
2. B.S. in CMDA Degree Proposal
3. Professor Eric Smith – Degree Presentation

RESOLUTION TO APPROVE THE BACHELOR OF SCIENCE DEGREE IN COMPUTATIONAL MODELING AND DATA ANALYTICS

WHEREAS, Computational Modeling and Data Analytics (CMDA) encompasses rapidly emerging, scientifically critical areas within mathematics, statistics, and computer science, and

WHEREAS, CMDA provides the blend of mathematical, statistical, and computational skills needed to prepare data scientists that are able to confront the ever-increasing data challenge that is revolutionizing disciplines across the scientific spectrum, including genomics, network analysis, climate and environment, communications systems, security and defense, energy systems, and health care to name a few, and

WHEREAS, CMDA is integral to the extraction of information from large data sets, in which the analyses and solutions of complex data-based problems are made possible through modeling, simulation and optimization, as well as through new mathematical and statistical innovations realized from growing computational power, and

WHEREAS, the Bachelor of Science in CMDA will provide students with the computational skills needed to work with vast data sets and to develop code for specialized applications, the mathematical skills needed to develop the intricate models describing such data, and the statistical skills required to assess uncertainty and make predictions, and

WHEREAS, the Bachelor of Science in CMDA will prepare graduates for interdisciplinary research and education, with employment in the private sector, employment in state and federal government agencies, and for post-baccalaureate training, and

WHEREAS, the College of Science, with help from the College of Engineering, is in an excellent position to initiate a Bachelor of Science in CMDA in that it draws from the expertise of three historically strong departments at Virginia Tech (Statistics, Mathematics and Computer Science), and because of recent additions of junior and senior faculty who are actively engaged in research in computational modeling and data analytics, and

WHEREAS, the degree is unique in the Commonwealth of Virginia, and will be one of only a few similar programs in the United States, establishing Virginia Tech and the Commonwealth as key leaders in education for one of the most critical technologies of the future.

NOW, THEREFORE BE IT RESOLVED that the Bachelor of Science in Computational Modeling and Data Analytics be approved effective Spring 2015 and the proposal forwarded to the President, the Board of Visitors, and the State Council of Higher Education for Virginia (SCHEV) for approval, and to the Southern Association of Colleges and Schools (SACS) for notification.

RECOMMENDATION:

That the resolution to approve the bachelor of science in computational modelling and data analytics be approved.

March 24, 2014

Virginia Tech Degree Proposal
Bachelors of Science in Computational Modeling and Data Analytics
(CIP: 27.0304)

Type of degree action (circle one): ☒ New Spinoff Revision Discontinuance

Program description

The College of Science at Virginia Tech requests approval for a new Bachelor of Science degree in Computational Modeling and Data Analytics (CMDA) to commence in the fall semester of 2014. This program draws on expertise from three historically strong departments at Virginia Tech: Statistics, Mathematics, and Computer Science. By combining elements of these traditional disciplines with new, innovative, interdisciplinary courses, we have developed a model quantitative sciences program that will train students in emerging computational techniques for a wide spectrum of application areas, including the sciences, engineering, industry, business, and more. Students completing this degree will be able to formulate and answer questions that, due to their complexity, would otherwise be unapproachable in any systematic fashion. The CMDA degree program focuses on extracting information from large data sets, and on analyzing and solving problems through modeling, simulation, and optimization. It draws on the vast and growing computational power that has made these techniques feasible, and on the mathematical and statistical innovations that power has enabled. This degree will produce students able to understand, and solve, the emerging, complex, data-based problems of the 21st century.

In combining knowledge from three existing majors (Statistics, Mathematics, and Computer Science) with several newly developed integrated courses, the CMDA degree creates a synthesis of modeling, data-centered research, and computational analysis that is currently not possible solely within these or any other major. Accordingly, the CMDA curriculum is not a juxtaposition of these three sciences: it is an integration of complementary fields of knowledge to create a degree that will produce a strong analytical scientist. While computational thinking and informatics/digital fluency are becoming basic skills needed in all disciplines, this program is specifically designed to develop individuals into applications-oriented leaders in these areas. Graduates of this degree program will be sought by “big data” companies, by companies who develop algorithms and mathematical/statistical models for quantitative attacks on otherwise intractable problems, and by companies that require computational tools for high-tech manufacturing. For the same reasons, they will be sought by government agencies and national labs, and be attractive to graduate programs. As an interdisciplinary degree, CMDA will be housed within the College of Science’s Academy of Integrated Science (www.science.vt.edu/ais).

Curriculum summary

The B.S. in Computational Modeling and Data Analytics comprises 120 credits, earned following either of two paths.

In the *general option* credits are distributed across courses in the following categories: 1) Curriculum for a Liberal Education (38 credits), 2) Entry-level courses (25 credits), 3) CMDA Required Core (18 credits), 4) Restricted Electives (12 credits), and 4) Free Electives (27 credits).

Curriculum for a Liberal Education (38 credits)

Area 1: Writing and Discourse (6)

Area 2: Ideas, Cultural Traditions, and Values (6)

Area 3: Society and Human Behavior (6)

VT Degree Proposal

B.S. Computational Modeling and Data Analytics

Area 4: Scientific Reasoning and Discovery (8)

Area 5: Quantitative and Symbolic reasoning (MATH 1205-6, Calculus, 6)

Area 6: Creativity and Aesthetic Experience (3)

Area 7: Critical Issues in a Global Context (3)

Entry-level Statistics, Mathematics, and Computer Science Courses (25 credits)

CS 1114: Introduction to Software Design (3)

CS 2114: Software Design and Data Structures (3)

MATH 1114: Elementary Linear Algebra (2)

MATH 1224: Vector Geometry (2)

MATH 2214: Introductory Differential Equations (3)

MATH 2224: Multivariable Calculus (3)

STAT 3005-6: Statistical Methods (6)

STAT 3104: Probability and Distributions (3)

CMDA Required Core (18 credits)

CMDA 3605: Mathematical Modeling I (3)

CMDA 3606: Mathematical Modeling II (3)

CMDA 3634: Computer Science Foundation for Computational Science (3)

CMDA 3654: Introductory Data Analytics and Visualization (3)

CMDA 4654: Intermediate Data Analytics and Machine Learning (3)

CMDA 4864 CMDA Capstone (3)

Restricted Electives (12 credits from the following):

CS 3114 Data Structures and Algorithms (3)

CS 4214 Simulation and Modeling (3)

STAT 4004 Methods in Statistical Computing (3)

STAT 4214 Regression (3)

STAT 4444 Applied Bayesian Statistics (3)

MATH 4144 Advanced Linear Algebra (3)

MATH 4445-6 Numerical Analysis (6)

PHYS 4755-6 Computational Physics (6)

CMDA 4964 Field Study (3)

CMDA 4604 Intermediate Topics in Mathematical Modeling (3)

CS 4104 Data and Algorithm Analysis (3)

CS 4604 Database Management Systems (3)

STAT 4204 Experimental Design (3)

STAT 4364 Statistical Genomics (3)

STAT 4504 Applied Multivariate Analysis (3)

MATH 4425-6 Fourier Series PDE (6)

BIOL 4075-6 Bioinformatics Methods (6)

CMDA 4664 Computational Stochastic Modeling (3)

CMDA 4994 Undergraduate Research (3)

A sample plan of study for students entering as freshmen and going through the general option:

Year	Fall Semester	Spring Semester
Freshman	Area 5: MATH 1205 Calculus (3)	Area 5: Math 1206 Calculus (3)
	Math 1114 Linear Algebra (2)	Math 1224 Vector Geometry (2)
	Area 1: COMM 1015 Comm Skills (3)	Area 1: COMM 1016 Comm Skills (3)
	Area 6: Creativity and Aesthetic (3)	Area 4: PHYS 2305 Foundations of Physics I (4)
	Area 7: Critical Issues Global (3)	CS 1114 Intro to Programming (3)
Sophomore	STAT 3005 Statistical Methods I (3)	STAT 3006 Statistical Methods II (3)
	MATH 2214 Introductory Differential Equations (3)	MATH 2224: Multivariable Calculus (3)
	CS 2114 Software Design (3)	STAT 3104 Probability & Distributions (3)
	Area 4: PHYS 2306 Foundations of Physics II (4)	Area 2: Ideas, Cultural Traditions (3)
	Free Elective (3)	Free Elective (3)
Junior	CMDA 3605 Mathematical Modeling(3)	CMDA 3606 Mathematical Modeling (3)

	CMDA 3634 Comp. Sci. for CMDA (3)	CMDA 4654 Intermediate Data Analytics and Machine Learning (3)
	CMDA 3654 Introductory Analytics (3)	Restricted elective (3)
	Restricted elective (3)	Area 3: Society and Human Behav. (3)
	Free Elective (3)	Free Elective (3)
Senior	CMDA 4864 Capstone (3)	Restricted elective (3)
	Restricted elective (3)	Area 3: Society and Human Behav. (3)
	Area 2: Ideas, Cultural Traditions (3)	Free Elective (3)
	Free Elective (3)	Free Elective (3)
	Free Elective (3)	Free Elective (3)

In the *Integrative Quantitative Science (IQS) option*, students enroll in the newly created, entry-level Integrated Quantitative Science sequence (CMDA 2005-2006). This novel sequence, a 12 credit sophomore-level offering, integrates many of the fundamentals from mathematics and statistics employed in subsequent courses. By covering these topics in an integrated format, rather than as the separate courses found in the general option, the IQS option is able to require three fewer entry-level credits. The total of 120 credits in the IQS option are distributed across courses in the following categories: 1) Curriculum for a Liberal Education (38 credits), 2) Entry-level courses (22 credits), 3) CMDA Required Core (18 credits), 4) Restricted Electives (12 credits), and 4) Free Electives (30 credits).

Curriculum for a Liberal Education (38 credits)

Area 1: Writing and Discourse (6)

Area 2: Ideas, Cultural Traditions, and Values (6)

Area 3: Society and Human Behavior (6)

Area 4: Scientific Reasoning and Discovery (8)

Area 5: Quantitative and Symbolic reasoning (MATH 1205-6, Calculus, 6)

Area 6: Creativity and Aesthetic Experience (3)

Area 7: Critical Issues in a Global Context (3)

Entry-level Statistics, Mathematics, and Computer Science Courses (22 credits)

CMDA 2005: Integrated Quantitative Science (6)

CMDA 2006 Integrated Quantitative Science (6)

CS 1114: Introduction to Software Design (3)

CS 2114: Software Design and Data Structures (3)

MATH 1114: Elementary Linear Algebra (2)

MATH 1224: Vector Geometry (2)

CMDA Required Core (18 credits)

CMDA 3605: Mathematical Modeling I (3)

CMDA 3606: Mathematical Modeling II (3)

CMDA 3634: Computer Science Foundation for Computational Science (3)

CMDA 3654: Introductory Data Analytics and Visualization (3)

CMDA 4654: Intermediate Data Analytics and Machine Learning (3)

CMDA 4864 CMDA Capstone (3)

Restricted Electives (12 credits from the following):

CS 3114 Data Structures and Algorithms (3)

CS 4104 Data and Algorithm Analysis (3)

CS 4214 Simulation and Modeling (3)

CS 4604 Database Management Systems (3)

STAT 4004 Methods in Statistical Computing (3)

STAT 4204 Experimental Design (3)

STAT 4214 Regression (3)

STAT 4364 Statistical Genomics (3)

VT Degree Proposal

B.S. Computational Modeling and Data Analytics

STAT 4444 Applied Bayesian Statistics (3)

MATH 4144 Advanced Linear Algebra (3)

MATH 4445-6 Numerical Analysis (6)

PHYS 4755-6 Computational Physics (6)

CMDA 4964 Field Study (3)

CMDA 4604 Intermediate Topics in Mathematical Modeling (3)

STAT 4504 Applied Multivariate Analysis (3)

MATH 4425-6 Fourier Series PDE (6)

BIOL 4075-6 Bioinformatics Methods (6)

CMDA 4664 Computational Stochastic Modeling (3)

CMDA 4994 Undergraduate Research (3)

A sample plan of study for students entering as freshmen and going through the IQS option:

Year	Fall Semester	Spring Semester
Freshman	Area 5: MATH 1205 Calculus (3)	Area 5: Math 1206 Calculus (3)
	Math 1114 Linear Algebra (2)	Math 1224 Vector Geometry (2)
	Area 1: COMM 1015 Comm Skills (3)	Area 1: COMM 1016 Comm Skills (3)
	Area 6: Creativity and Aesthetic (3)	Area 4: PHYS 2305 Foundations of Physics I (4)
	Area 7: Critical Issues Global (3)	CS 1114 Intro to Programming (3)
Sophomore	CMDA 2005 Integrated Quantitative Science I (6)	CMDA 2006 Integrated Quantitative Science II (6)
	CS 2114 Software Design (3)	CMDA 3634 Comp. Sci. for CMDA (3)
	Area 4: PHYS 2306 Foundations of Physics II (4)	Area 2: Ideas, Cultural Traditions (3)
	Free Elective (3)	Free Elective (3)
	CMDA 3605 Mathematical Modeling (3)	CMDA 3606 Mathematical Modeling (3)
Junior	CMDA 3654 Introductory Analytics (3)	CMDA 4654 Intermediate Data Analytics and Machine Learning (3)
	Restricted elective (3)	Restricted elective (3)
	Free Elective (3)	Area 3: Society and Human Behav. (3)
	Free Elective (3)	Free Elective (3)
	CMDA 4864 Capstone (3)	Restricted elective (3)
Senior	Restricted elective (3)	Area 3: Society and Human Behav. (3)
	Area 2: Ideas, Cultural Traditions (3)	Free Elective (3)
	Free Elective (3)	Free Elective (3)
	Free Elective (3)	Free Elective (3)
	Free Elective (3)	Free Elective (3)

Students selecting the CMDA major early in their college career will be guided to the IQS option, while those who come to the major later, having already established a foundation in entry-level quantitative courses, will typically be guided towards the general option. The IQS option takes students immediately into the integrated world of CMDA, and while this is preferable, not all students will settle on the major soon enough to take this route. The general option, so named for its accessibility to students with a general quantitative background, provides the flexibility to accommodate those who have originally embarked on a traditional major such as statistics or computer science. This also includes transfer students and any others who have already built up a significant portion of relevant, entry-level credits. Both the general and the IQS option rest on the same core.

Among the six core courses, CMDA 3634 is a 3-credit course focusing on computational methods, including the introduction and analysis of data structures and algorithms and parallel computing. CMDA 3605-3606 are two three-credit courses equipping students with the tools of mathematical modeling. CMDA 3654 and 4654 are likewise two three-credit courses, these providing the statistical methods associated with data management and data analytics. CMDA 4864, the capstone course for the CMDA degree, will involve every student in a guided research

project, requiring application of the integrated mathematics, statistics, and computer skills they have developed through the degree program.

Relevance to university mission and strategic planning

Virginia Tech has long noted the need to develop both strong quantitative skills and deep interdisciplinary foundations if students are to reach their maximum potential, be it for entering the constantly changing job market, or for going on to graduate school. *A Plan for a New Horizon* (<http://www.president.vt.edu/strategic-plan/2012-plan/2012-strategic-plan.pdf>), the university's recently revised strategic plan, emphasizes that "We live in a data-driven, networked society. Economic, technological, and social progress depend on the development of an analytically savvy, multidisciplinary workforce." Virginia Tech is committed to empowering students "to be knowledgeable, wise, and effective participants in an increasingly digital age in areas ranging from art to science to civic discourse." Moreover, "The questions that can be asked and the methods and data sets that can be used to solve complex problems are being fundamentally altered by technology and the information sciences. Being effective in this environment means being able to apply and manage information technology while taking advantage of networking, collective intelligence, simulation, data mining, and modeling."

Clearly one of the main goals of the university is the training of students to be quantitatively adept and ready to meet the needs of industry, government and academics in an era of abundant (in some cases, over-abundant) data. CMDA aspires to the pinnacle of this goal. Again from *A Plan for a New Horizon*:

"Virginia Tech is committed to a progressive agenda that provides the educational opportunities, computational infrastructure, and learning spaces necessary to prepare students and faculty to excel in this environment. Emphasis will be given to developing core competencies in computational thinking, information literacy, and analytical methods."

The Bachelor of Science degree in CMDA is not only timely with regard to this perspective, it moves far beyond the baseline objectives that have been set for the university as a whole. CMDA will build deep, expert knowledge on a richly developed computational core to produce Virginia Tech's most highly skilled, integrated practitioners of quantitative science.

Justification for the proposed program

STEM education is a critical focus area in Virginia. A recent news article (<https://news.virginia.edu/content/governor-education-leaders-call-more-focus-stem-h-efforts>) summarizes a call by the Virginia Business Higher Education Council for stronger initiatives in STEM education, pointing out opportunities and issues associated with educating students to have top quantitative skills:

"An opportunity for the commonwealth is that Virginia is among the nation's leaders when it comes to the number of STEM-H jobs projected to be created in next four years. These are the engineers, computing experts, doctors and others whose professions reside under the high-paying umbrella of science, technology, engineering, mathematics and health. One problem, however, is that the state's colleges and universities aren't yet in position to fill those jobs with ample numbers of graduates, and the United States overall faces stiff international competition."

At that meeting, Gov. Robert F. McDonnell noted “The pace of innovation around the world is breathtaking. Are we going to be prepared to be able to keep up with it?” The governor also focused on STEM education in his cover letter for the document entitled Virginia STEM-H TRACT (<http://www.education.virginia.gov/STEM-H-TRACT-2012.pdf>) :

“It is our responsibility to ensure that each and every citizen of Virginia has the skills and knowledge to be competitive in this global society. With an evolving demand for science, technology, engineering, mathematics and health (STEM-H) competencies, education institutes and industries must work together to build strong, innovative and economical career paths. The more Virginia students who attend our schools, colleges and universities and emerge with the skills and training necessary to compete for the best jobs in the 21st century, the stronger our state will be in the years ahead. It will make Virginia an even greater jobs magnet with a highly skilled workforce.”

Data and especially big data are an integral component of 21st-century science and industry. Advances in genomics, medicine, drug development, astronomy and more are intimately connected to, indeed are made possible by, the ability to collect large volumes of data and to perform the analysis and modeling needed to extract information from that data. There are numerous application areas in physical sciences, medical and health sciences, security, and even the arts, only recently made possible by the tools and techniques that comprise the basis for CMDA. To take one example, genomics and the revolution in genetic information have been built on data sets that are often of terabyte size. Likewise, brain imaging generates terabytes of information requiring extensive processing and filtering before the highly complex modeling process can even begin. Models from climatology are not only large and mathematically complex, they add multiple layers of stochastic complexity to incorporate uncertainties at different scales. CMDA will train students to better understand, analyze and communicate information embedded in these massive data sets and to tackle the analysis problems these data present. This goes to the heart of the STEM-H call by the governor and Virginia educators.

Not only is a strong job market anticipated for those earning the CMDA degree, these students will be ideally positioned, should they so choose, to pursue advanced degrees in the quantitative sciences, particularly in computationally-based programs in mathematics, in statistics, and in related fields. Those moving on to a Master's or Ph.D. degree should expect even stronger employment opportunities. CMDA also offers sufficient flexibility to allow a second major or a minor, further enhancing graduates' marketability.

To summarize, CMDA will train students in the computational skills needed to work with vast data sets and to develop code for specialized applications, in the mathematical skills needed to develop the intricate models describing such data, and in the statistical skills required to assess uncertainty and make predictions. As illustrated by the examples listed above, the complexity of emerging problems requires collaboration across multiple disciplines; these problems do not yield to the individual approaches born of isolated thinking so commonly employed in the past. CMDA provides a new and needed pathway for imbuing students with the needed collaborative inclination and integrative skills, while incorporating the strengths of analytical thinkers, data scientists, coders, and modelers. The CMDA synthesis of statistical, mathematical, and computing methodologies will produce the graduates desired by the quantitatively technical job and academic markets of today and of the foreseeable future.

Student Demand

The College of Science has been tracking student interest for the CMDA program over the past year. Students contacted have included incoming freshmen during orientation and prospective students visiting Virginia Tech during Hokie Focus weekends, spring break visits, and weekly information sessions at the College of Science. Of these students, 24 have expressed significant interest in CMDA by requesting additional information, either in person or by email. Many of them are particularly excited about the opportunity to integrate knowledge across mathematics, statistics, and computer science in connection with big data applications. Interdisciplinarity is proving to be a key attractor for the CMDA program.

Fall 2013 is the first semester that one of the new courses, CMDA 3605, is being offered. With little promotion and no degree in place, the enrollment for this course is 12 students. Existing courses illustrate the great potential for populating CMDA courses. Table 1 shows total enrollment for relevant courses in statistics, mathematics, and computer science from 2009 to fall 2013. Listed are the restricted electives for the CMDA curriculum, these being good indicators of student interest in CMDA areas. Note particularly that the enrollment in almost all of these courses has grown substantially over the five-year period. Also listed is a recently introduced graduate course, STAT 5525, in data analytics. Drawing from the much smaller graduate population, this course has grown to 24 students for Fall, 2013.

Table 1. Total enrollment for Restricted Elective courses in the CMDA curriculum from 2009 to 2013 (data retrieved from Banner on 8/30/2013)

Existing Courses	2009	2010	2011	2012	2013
CS 3114	45	95	82	211	281
CS 4104	NA	NA	NA	85	107
CS 4214	NA	NA	NA	NA	31
CS 4604	23	42	35	NA	39
MATH 4425-6	51	44	41	51	71
MATH 4144	NA	NA	NA	8	7
MATH 4445-6	86	70	92	112	122
STAT 4214	27	34	30	41	77
STAT 4004	14	13	14	18	27
STAT 4204	24	27	29	27	37
STAT 4444	25	6	17	8	12
STAT 4504	NA	10	NA	5	15
STAT 5525	NA	NA	12	11	24

Market Demand

Summary data from the Bureau of Labor Statistics and discussions with industry leaders project strong demand for CMDA graduates. This demand will emanate from both industry and government, as indicated next.

In the industrial realm the jobs are numerous and from a diverse set of companies. Large employers such as ComScore, IBM, Google, Yahoo, Netflix, Amazon, and many others seated in the ever-expanding internet-based economy, use vast amounts of both publicly available and privately obtained data to guide advertising, product development, and market expansion. They

create high demand for individuals with the skills to handle, process, and understand such data, the very skills that CMDA will impart. Closer to home, tech companies in northern Virginia (cited below) have emphasized the need for students with the blend of skills in statistics, computer science and mathematics that CMDA will provide.

Chis Chmura, president and chief economist of Chmura Economics and Analytics of Richmond, in addressing the September 2012 meeting of the Virginia Business Higher Education Council (cited at the top of this section), stated that STEM-H job growth in Virginia through 2016 is projected at 2.5 percent annually, while overall job growth is projected at just 1.7 percent “During that period, she said, Virginia can expect to see 79,000 STEM-H jobs, either newly created or replacements for retiring professionals. But the state’s colleges and universities are not graduating enough people in those fields to fill the jobs.” This is a gaping hole that CMDA will help to fill.

Government agencies in every administrative arm employ quantitative scientists to improve the quality of the data available for policy analysis and to provide state-of-the-art quantitative analysis. The data-dependence of these agencies continues to increase, and with it the strength of a job market where CMDA graduates will be among the best qualified. Reflecting growth in research and development in the physical, engineering, and life sciences, where skills in design of modeling procedures and assessing results prove highly useful, a number of agencies have initiatives related to big data and complex modeling. Included are: **Department of Defense** – Data to Decisions; **National Institutes of Health** – 1,000 Genomes Project Data Available on Cloud; **Department of Energy** – Scientific Discovery Through Advanced Computing; and **US Geological Survey** – Big Data for Earth System Science.

Letters of support for CMDA have been received from Agilex, Extreme Networks, IBM, JPI, Paragon Technology, NetApp, Outcome Capital, Salient Systems, Spear and ICF International. Some comments from the companies follow.

“IBM has precise interests in this new major. Specifically, we are interested in participating in the development of a workforce suitable for creative use of massive datasets for predictive, actionable, and risk analysis. We envision that the educational platforms to be investigated in this proposal such as integrated quantitative science, mathematical modeling, data analytics, and computational physics will play a significant role in fulfilling our nation’s future talent needs.”

“As an innovation leader in the data storage industry, NetApp sees an enormous requirement for developing new talent in the data management and analytics field. This need transcends day-to-day business operations to the mission-critical applications that defend the security of our nation. The criticality of this curriculum and the resulting innovative outcomes will reinforce Virginia Tech’s position at the cutting edge of research and forefront of economic contribution.”

“We are confident that the this collaborative initiative, combining cutting edge curriculum and research from multiple scientific and engineering disciplines with the strengths of industry mentors can lead to advances in data intelligence that address critical state and national needs. ... If given the opportunity, Spear will support this curriculum assuming that the degree development proceeds as planned.”

There is, of course, no specific job title corresponding to the interdisciplinary CMDA degree. An indication of job demand is given in Table 2 for relevant job categories available at the Bachelor’s degree level from the Bureau of Labor Statistics. The percentage change is quite high in these three fields. The market is expected to be even stronger in the northern Virginia and Washington DC area.

Table 2. Degree-related employment projections 2010-2020

Occupational Title	SOC Code	2010 Employment	Projected 2020 Employment	Percent change
Survey Researchers	19-3022	19,600	24,300	24.1%
Computer Systems Analysts	15-1121	544,400	664,800	22.1%
Operations Research Analysts	15-2031	64,600	74,000	15.0%
Software Developer	15-1132	913,000	1,183,900	29.7%

(data from <http://www.bls.gov/ooh/>, accessed May 2013)

Resource Needs/Savings

The newly created CMDA courses will be delivered by the departments of Statistics, of Mathematics, and of Computer Science. It is anticipated that two new hires at the assistant professor rank in the field of data analytics/statistics will be assigned to the CMDA program. These faculty members will be housed jointly within the Academy of Integrated Science and the Department of Statistics. Graduate students (four) will be responsible for running recitation sessions for students in CMDA courses. One staff member will be hired to provide administrative support and advising services. This person will support not just CMDA, but all Academy degree programs, so effectively $\frac{1}{4}$ of this position is for CMDA.

RESOURCE	ESTIMATED COSTS (NA if not applicable)
Faculty (salary & fringe)	\$223,093
Administrative Staff (salary & fringe)	\$45,850
Graduate Teaching Assistants (stipend, fringe & tuition)	\$113,564
Space	NA
Library	NA
Equipment	NA
Other	NA
Total	\$382,507

The faculty hires are associated with re-distribution of new hires within the College of Science. The College initiated cluster hiring in 2004 as a means of strategically re-aligning resources to better meet the needs of the university, of positioning the College to address interdisciplinary grand challenges in science, and of educating our students in a more comprehensive manner. Hiring in clusters, rather than specific disciplines, is a strategy for the college to seek and acquire the best faculty to promote our research and educational agenda and thereby achieve a stronger institution. Reallocation/realignment of resources to make faculty hires in CMDA is a continuation of the College's on-going strategic initiatives.

B.S. DEGREE IN COMPUTATIONAL MODELING AND DATA ANALYTICS (CMDA)

Eric P. Smith

A collaboration between
Statistics, Mathematics, and Computer Science
Peter Haskell, College of Science Barbara Ryder, College of Engineering



Background

- Increased need for workers trained in the analysis of “Big Data”
 - **Precision agriculture:**
Using predictive weather analytics to feed future generations
 - http://www.research.ibm.com/articles/precision_agriculture.shtml
 - From FitBits To Clinical Studies: How Big Data Could Change Medicine
 - <http://www.forbes.com/sites/matthewherper/2013/12/16/from-fitbits-to-clinical-studies-how-big-data-could-change-medicine/>
 - Supercomputing the Climate: NASA's Big Data Mission
 - http://www.csc.com/cscworld/publications/81769/81773-supercomputing_the_climate_nasa_s_big_data_mission
 - Big Data and the Future of Ecology
 - Stephanie E Hampton, Carly A Strasser, Joshua J Tewksbury, Wendy K Gram, Amber E Budden, Archer L Batcheller, Clifford S Duke, and John H Porter 2013. Big data and the future of ecology. *Frontiers in Ecology and the Environment* **11**: 156–162. <http://dx.doi.org/10.1890/120103>

Preparation

- National and state initiatives associated with STEM-H
- Discussion with former students and VT-Serge
- Demand from companies such as IBM, Comscore, NetApp, Salient, and Capital Federal for workers with background in statistics, mathematics, and computer science
- A need to train students
 - Who can work in **teams**
 - Know how to combine **science**, **mathematics** and **algorithms**
 - Who have experience with **real** data connected to **real** problems
 - Who are able to **communicate** results of an analysis

Needs and the program at Virginia Tech

- Train the new quantitative student by providing background in

- Statistics
- Computer Science
- Mathematics

These need to be
integrated not **separated**

- Skilled in
 - Manipulating large data sets
 - Data cleaning
 - Predictive and mathematical modeling
 - Data art, infographics and integrative presentation



New undergraduate
program

Undergraduate program

- **Integrated** courses in statistics, mathematics and computer science
- **New** courses on tools for big data, analytics and computational mathematics
 - Focus on **applications**
 - Room for “**tracks**” or double majors
 - Opportunities for internships

Sample Program

Year	Fall Semester	Spring Semester
Freshman	Area 5: MATH 1205 Calculus (3)	Area 5: Math 1206 Calculus (3)
	Math 1114 Linear Algebra (2)	Math 1224 Vector Geometry (2)
	Area 1: COMM 1015 Comm Skills (3)	Area 1: COMM 1016 Comm Skills (3)
	Area 6: Creativity and Aesthetic (3)	Area 4: PHYS 2305 Foundations of Physics I (4)
	Area 7: Critical Issues Global (3)	CS 1114 Intro to Programming (3)
Sophomore	CMDA 2005 Integrated Quantitative Science I (6)	CMDA 2006 Integrated Quantitative Science II (6)
	CS 2114 Software Design (3)	CMDA 3634 Comp. Sci. for CMDA (3)
	Area 4: PHYS 2306 Foundations of Physics II (4)	Area 2: Ideas, Cultural Traditions (3)
	Free Elective (3)	Free Elective (3)
Junior	CMDA 3605 Mathematical Modeling (3)	CMDA 3606 Mathematical Modeling (3)
	CMDA 3654 Introductory Analytics (3)	CMDA 4654 Intermediate Data Analytics and Machine Learning (3)
	Free Elective (3)	Free Elective (3)
	Free Elective (3)	Area 3: Society and Human Behav. (3)
	Restricted elective (3)	Restricted elective (3)
Senior	CMDA 4864 Capstone (3)	Restricted elective (3)
	Restricted elective (3)	Area 3: Society and Human Behav. (3)
	Area 2: Ideas, Cultural Traditions (3)	Free Elective (3)
	Free Elective (3)	Free Elective (3)
	Free Elective (3)	Free Elective (3)

Prepare

Integrate

Core

Advanced

Committee Minutes

BUILDINGS AND GROUNDS COMMITTEE

**The Inn at Virginia Tech
7:45 a.m., Tour from The Inn
10:15 a.m. Open Session, Solitude Room**

March 24, 2014

Open Session

Board Members Present: Mr. John Rocovich, Mr. William Fairchild, Mr. Michael Quillen

VPI&SU Staff: Mr. Doug Anderson, Dr. Malcolm Beckett, Captain Stephen Bennett (VT Rescue Squad), Mr. Tom Bell, Mr. Bob Broyden, Mr. Rosaire Bushey, Dr. Lay Nam Chang, Ms. Vickie Chiocca, Mr. Van Coble, Dr. Elizabeth Flanagan, Mr. Bill Foster, Chief Kevin Foust, Dr. Lance Franklin, Mr. Tom Gabbard, Mr. Mark Gess, Mr. Mark Helms, Mr. Larry Hincker, Mr. Rick Hinson, Dr. Joan Hirt, Mr. Joe Hoeflin, Mr. Ryan Johnson, Ms. Leigh LaClair, Ms. Heidi McCoy, Mr. Richard McCoy, Dr. Polly Middleton, Ms. Kim O'Rourke, Mr. Charles Ruble, Dr. Timothy Sands, Dr. Jill Sible, Ms. Kayla Smith, Mr. Ken Smith, Mr. Jason Soileau, Mr. Robert Spieldenner, Ms. Joann Sutphin, Dr. James Tanko, Dr. Sherwood Wilson

Guests: Mr. Richard Furman, Dr. Jeff Kirwan, Ms. Rebekah Paulson, Ms. Beth Umberger

- 1. Tour of Davidson Hall:** The Committee toured the newly renovated Davidson Hall building, the Smithfield Plantation, and the future site for the Marching Virginians Practice Facility.
- 2. Opening Remarks and Approval of Minutes of the November 18, 2013 Meeting:** The minutes of the November 18, 2013 meeting were approved.
- 3. Capital Project Status Report:** The Committee received an update on the status of all capital projects, including two currently in design phase: the Fire Alarm Systems project and the Improve Kentland Facilities project. They also received an update on five major construction projects, which included the Agriculture Program Relocation, the Signature Engineering Building, and the Upper Quad Residence Halls. Mr. Rocovich requested an update on Phase III of the Agriculture Program Relocation at the June 2014 Board meeting.
- * 4. Resolution on Demolition of University Building 433J:** The Committee recommended full board approval of a resolution to demolish building 433J on university property located at the Glade Road Research Center in Blacksburg, Virginia. This building is a 1,025 gross square foot (GSF) quonset hut structure built in 1965, previously used for applied research and office space. The building is unoccupied, is in generally poor condition, and is uneconomical to repair.

5. **Design Preview for the Renovation and Renewal of Academic Buildings:** The Committee previewed and approved the preliminary designs for the renovation and renewal of three academic buildings located on the Drillfield that currently comprise a total 55,825 GSF: Davidson Hall-Front Section, Sandy Hall, and the Liberal Arts Building. Renovations will include exterior repairs such as masonry and window replacement, as well as interior rehabilitation. A tower addition will also be constructed on the northwest end of the Liberal Arts Building to provide vertical egress circulation and accessible restrooms.
6. **Design Preview/Review for the Virginia Tech Rescue Squad Vehicle Garage:** The Committee reviewed and approved the proposed designs for an approximately 1,050 GSF garage to serve the Virginia Tech Rescue Squad. The new garage, located in proximity to the rescue squad facilities on Barger Street, will provide a secure and temperature-controlled environment for housing two rescue squad vehicles.
7. **Design Preview/Review for the Marching Virginians Practice Facility:** The Committee reviewed and approved the proposed designs for the new Marching Virginians Practice Facility. The location is in close proximity to the existing Recreational Sports fields that are east of Research Center Drive. This initial construction phase comprises a 4,350 GSF enclosed structure and a 4,050 GSF covered, open air pavilion providing shelter for music rehearsals. This construction is specifically designed to accommodate future additions for later phases of build-out. The adjacent artificial turf field will accommodate a regulation-size soccer field, plus sidelines.
8. **Design Review for the Classroom Building:** The Committee reviewed and approved the proposed designs for the new 73,275 GSF three story Classroom Building, home to general assignment classrooms and interdisciplinary physical science teaching laboratories. Supporting a wide range of undergraduate instruction, the classrooms will facilitate interactive learning. The building location is within the northwest portion of the existing Derring surface lot near the corner of Perry Street and West Campus Drive. As requested at the June 2013 meeting, the designs incorporated additional Hokie Stone elements.

Mr. Fairchild asked for information on classroom utilization that supports the construction of additional classroom space. Dr. Wilson briefed the Committee on a classroom utilization study, peer comparisons, and SCHEV utilization data which illustrate the need for additional classrooms. Dr. Ken Smith noted that the layout for the proposed Classroom Building will provide more flexible classroom space for collaborative learning, which is especially limited in existing facilities.
9. **Concept Review on Drillfield Drive Road Improvements:** The Committee reviewed and approved the concept for the Drillfield Drive road improvements. This project will allow two-way traffic between Stanger and Kent Streets by converting the existing green islands to mimic roundabout characteristics. This new north-south corridor will reduce vehicular traffic on the Drillfield, improve pedestrian safety, and enhance the pedestrian experience. The road and areas at and directly adjacent to the Pylons will not be affected. This project is consistent with the overall Drillfield master plan and may be completed in multiple phases. Rector Quillen emphasized the need to communicate with the alumni base regarding the proposed improvements.

- 10. Design Preview/Review for the Indoor Athletic Practice Facility:** The Committee reviewed and approved the proposed designs for the new Indoor Athletic Practice Facility which will serve a number of Olympic sports programs and the football program. Interior space features will allow multiple sports programs to practice in actual field conditions. The west side of the facility will have a continuous line of overhead doors to 'open up' the length of the building to the exterior. A catwalk or mezzanine will be provided to permit filming and observation of the field, and a scoreboard will be installed to simulate game conditions. The building site is on the east portion of the existing outdoor football practice fields, south of the Football Locker Room facility. The current design is in keeping with the previously approved site location and does not encroach into the existing woods site.
- *11. Resolution for Smithfield Plantation Historic Easement:** The Committee recommended full board approval of a resolution authorizing the university to partner with the Smithfield-Preston Foundation and execute a historic easement from Preservation Virginia. Preservation Virginia intends to convey ownership and day-to-day operation of the Smithfield Plantation, located on the Virginia Tech campus, to the Smithfield-Preston Foundation with the conveyance subject to the creation of a historic easement. The owner of the historic easement holds a regulatory obligation to ensure that the property owner maintains the property in accordance with policies established by the Virginia Department of Historic Resources Historic Easement Program. Preservation Virginia desires to convey the historic easement to Virginia Tech to efficiently monitor and undertake inspections and other stewardship activities to assist in preserving the features of the historic property. This easement will be held by Virginia Tech for a seven year trial period initially, and will be held in perpetuity should Virginia Tech meet its obligations during the trial period.
- 12. The Chair requested an update on the Capital Outlay Plan, specifically in regards to research facilities.** Dr. Wilson provided the members of the Committee with the list of proposed projects for the 2014-2020 Capital Outlay Plan (as approved at the March 2013 Board meeting) and information from the Six-Year Capital Outlay Plan for 2012-2018 (as approved at the June 2011 Board meeting) which includes research buildings in the current biennium. In the interest of time, the Chair requested that Dr. Wilson postpone this update to the next meeting, and also provide an update on the Airport Runway Extension and Route 460 Interchange projects at that time.

Adjournment

There being no further business, the meeting adjourned at 11:25 a.m.

***Requires full Board approval.**

BUILDING AND GROUNDS COMMITTEE
March 24, 2014
Capital Project Status Report

Project Name	Project Description	Estimated Total Project Cost	Non-General Funds	Project Team	Contract Completion Date	Project Status
DESIGN						
Classroom Building	This project provides for the design and construction of a 73,275 square foot (SF) academic building that will contain state-of-the-art instructional space to accommodate the unmet demand for multi-discipline general assignment classrooms and labs. The new academic building will include approximately 15 flexible classrooms and 4 laboratory rooms of various sizes and configurations to accommodate multiple teaching methods. The building will provide approximately 1,600 student stations with wireless capability throughout.	\$42,500,000	\$0	EYP Architecture & Engineering - Washington D.C.	TBD	Preliminary design is complete. Cost adjustments have been provided by the Department of General Services. Construction document development is in progress. Construction cost and contract negotiations are anticipated to be complete for construction to begin in fall 2014.
				W M Jordan, Inc. - Newport News, VA		
Fire Alarm Systems and Access	This project provides for critical life safety improvements in several educational and general facilities on campus. Fire alarm systems will be installed or expanded in several campus buildings including Randolph Hall, War Memorial Hall, Food Science and Technology, Norris Hall, Newman Library, Lane Hall, Patton Hall, Litton Reaves Hall, Whittemore Hall, Architecture Annex and Wallace Annex.	\$5,500,000	\$0	Multiple A/E Firms	TBD	Funding has been authorized through preliminary design only. Engineering design for Randolph Hall, War Memorial Hall, Food Science and Technology, Norris Hall, Patton Hall, Litton Reaves Hall, Whittemore Hall, Architecture Annex, Newman Library and Lane Hall are nearing completion. The Food Sciences and Technology building has been submitted for construction cost review. Release of construction funding is subject to cost approval by the Department of General Services.
				Multiple Contractors		
Improve Kentland Facilities	The project includes new construction of three buildings totaling approximately 28,900 GSF including a metabolism research laboratory, an applied reproduction facility, and an arena with animal demonstration and holding spaces for the College of Agriculture and Life Sciences.	\$7,600,000	\$0	Spectrum Design, PC - Roanoke, VA	TBD	Funding has been authorized for pre-planning design. An A/E firm has been selected and schematic design is in progress. The advancement of this project is subject to Department of General Services cost review and additional funding authorization.
				TBD		
Indoor Athletic Practice Facility	This project provides for the design and construction of a new indoor multi-sport practice facility large enough to accommodate football punting and kicking practice. The new facility will be located on the site of the existing football practice fields.	\$21,300,000	\$21,300,000	TBD	TBD	A Request for Qualifications (RFQ) was advertised and Design-Build team presentations were conducted in February 2014. The W.M Jordan/HKS proposal was selected and contract negotiations are in progress.
				TBD		
Marching Virginians Practice Facility	This project includes new construction of an equipment storage building, a covered open-air practice pavilion, and a soccer-size artificial turf field. The approximately 4,300 GSF building will provide the Marching Virginians with restrooms, lockers, instrument storage space, and a drum line room for percussion instruments. The 4,000 SF pavilion will be attached to the building and will provide a protected area for the Marching Virginians to practice during inclement weather. A lighted, soccer-size artificial turf field will be shared with Recreational Sports.	\$4,750,000	\$4,750,000	Thompson + Litton - Radford, VA	TBD	Construction document development is in progress for bidding in spring 2014. Anticipated completion of the turf field is fall 2014 with the building to follow in early 2015.
				TBD		
Renovate/Renew Academic Buildings	This project is to renovate three existing campus buildings - Sandy Hall, Liberal Arts Building and the original portion of Davidson Hall. Collectively, these renovations will increase the functionality of three underutilized building assets, address several deferred maintenance issues, and reduce critical space deficiencies. A small addition is planned for Sandy and Performing Arts Buildings to provide for elevator, ADA and circulation improvements.	\$27,000,000	\$0	Glavè & Holmes Associates- Richmond, VA	TBD	Following negotiations with the Bureau of Capital Outlay Management (BCOM) a construction budget of \$18,172,274 has been authorized. Preliminary design is progressing on schedule for submittal to the Department of General Services in March 2014.
				Grunley Construction- Rockville, MD		
Sciences Building Laboratory I	This project provides for design and construction of a new 80,000 SF building to house research and instructional space for the Department of Science.	TBD	TBD	TBD	TBD	This project is on hold pending release of planning funds from the Department of Planning and Budget.
				TBD		

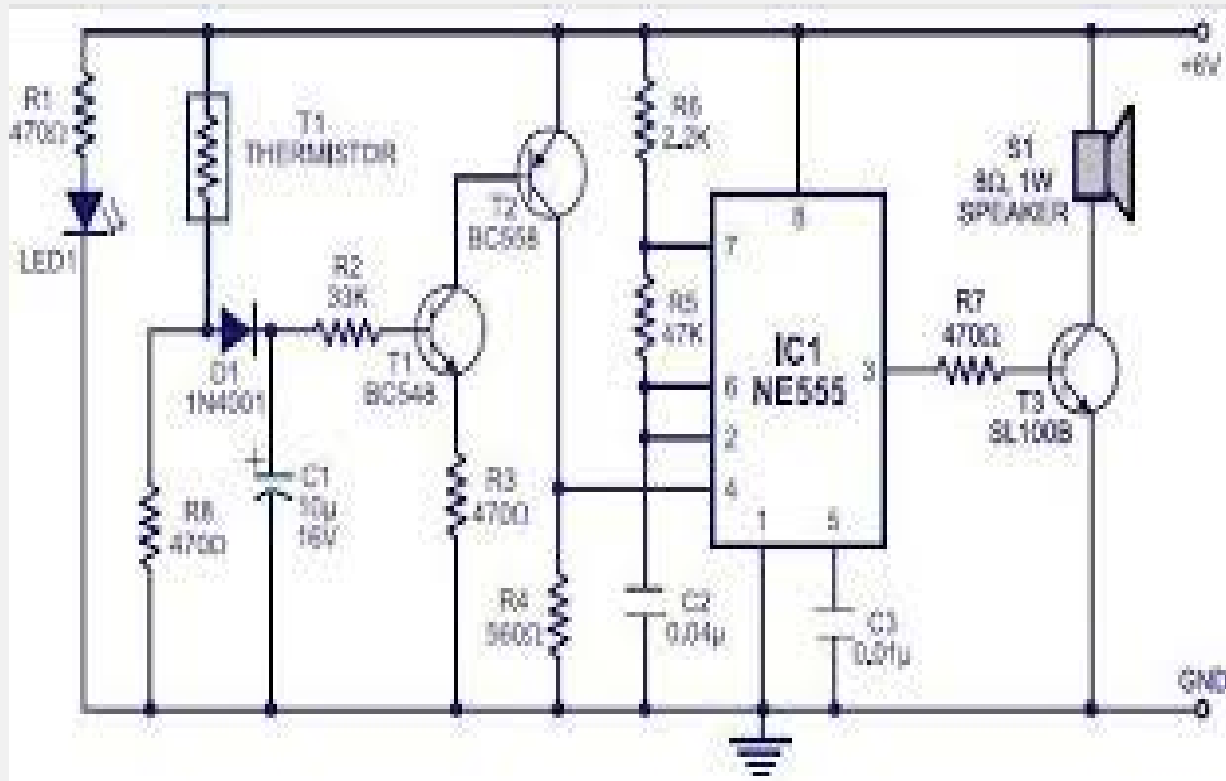
Project Name	Project Description	Estimated Total Project Cost	Non-General Funds	Project Team	Contract Completion Date	Project Status
CONSTRUCTION						
Agriculture Programs Relocation	This project for relocation of the Dairy Program from Southgate Drive to Kentland Farm is required to accommodate expansion of the Airport runway and relocation of Tech Center Drive. Planning, design, construction and financing by the Virginia Tech Foundation and a capital lease back to Virginia Tech was authorized by the BOV at the May 7, 2013 meeting.	\$14,000,000	\$14,000,000	Thompson & Litton - Radford, VA	March 30, 2014	Design is complete. Construction is being phased. The construction trailer has been installed and site work has begun. Value engineering and contract negotiations for the building construction is in progress. Project completion is needed by March 2015 to make way for the planned road construction and airport runway expansion.
				English Construction Company, Inc. - Lynchburg, VA		
Campus Fiber Optic Improvements Project	This project is for a new fiber-optic backbone and building connections which will increase capacity and diversity to ensure adequate and reliable service to the university.	\$2,000,000	\$2,000,000	Virginia Tech Network Infrastructure & Services	November 30, 2014	Construction is nearing completion to accommodate wiring connections and equipment installation. Efficiencies and cost savings have allowed expansion of the number of buildings receiving fiber feeder upgrades to increase from 38 to 60 buildings. Equipment purchases are being finalized. Installation and ancillary work is anticipated to be complete by summer 2014.
				Virginia Tech Network Infrastructure & Services		
Human and Agricultural Biosciences Building I (HABBI)	This project provides for a new 93,860 GSF advanced agricultural research laboratory facility.	\$53,759,344	\$0	Lord, Aeck & Sargent, Inc. – Atlanta, GA	December 9, 2013	Construction is substantially complete. Faculty and staff have moved into the building. Purchase of research equipment continues. Punch list and landscaping are nearing completion.
				Skanska USA Building, Inc. - Durham, NC		
Renovate Davidson Hall	This project provides for the demolition of the deteriorated and outdated center and rear section additions to Davidson Hall. The original building remains and a new replacement addition of 44,845 GSF will be constructed to provide modern laboratory and research space.	\$31,118,739	\$0	Einhorn Yafee Prescott - Washington, DC	January 16, 2014	Interior construction is 99% complete. Exterior construction has slowed due to unanticipated material delivery and weather delays. A delay claim has been issued by the contractor. Completion of the Hokie Stone exterior and landscaping is anticipated in May 2014.
				Barton Malow Company-Charlottesville, VA		
Signature Engineering Building	This project provides for a new 154,935 GSF state-of-the-art, technology enhanced flagship building for the College of Engineering to include research, classroom and office space.	\$95,218,249	\$47,609,125	Zimmer Gunsul Frasca Architects LLP - Washington, DC	December 14, 2013	Overall construction is approximately 90% complete. Structural steel and concrete are 100% complete. Construction of the building envelope (masonry, precast panels, metal panels, and Hokie Stone) is 99% complete. Mechanical, electrical, and plumbing rough-in, wall framing, drywall and interior finishes are ongoing. Construction of interior architectural features and specialty finishes has fallen behind due to material delays and construction complications. Anticipated substantial completion is now May 2014.
				Gilbane Building Company - Richmond, VA		
Unified Communications and Network Renewal Project	This project replaces outdated equipment and upgrades campus communications systems providing infrastructure and equipment enhancements over a five year period. The project scope includes upgrades to the Internet Protocol (IP) Network, the cable plant, and equipment rooms in buildings throughout campus.	\$16,508,000	\$16,508,000	Multiple A/E Firms	2016	Space allocation, architectural design and construction activities are underway for the addition and expansion of data rooms to house technology upgrades in designated campus buildings. Wiring and equipment upgrades are phased for completion building by building. Ninety buildings have been completed and put on-line out of the approximate 145 buildings on the target list. Approximately 50% of active campus services have migrated. The project is scheduled for completion in fall 2016.
				Various Contractors		
Upper Quad Residential Facilities	This project provides for the demolition and reconstruction of Brodie and Rasche residence halls to serve the Corps of Cadets. The new residence halls totaling approximately 210,000 GSF will provide over 1,000 beds in double and triple rooms sharing hall community bathrooms. These new residence halls will be constructed at the location of the existing Rasche Hall and Brodie Hall. Both buildings will provide double and triple occupancy rooms that meet the residence and in-room storage space needs of the cadets. Both new residence halls will provide dedicated meeting, community and group spaces specifically designed to meet corps program and organization needs. Thomas Hall and Monteith Hall will also be demolished as part of this project.	\$90,000,000	\$90,000,000	Clark Nexsen - Charlotte, NC	2016	Project design is nearing completion. Phased construction contracting will provide an expedited project delivery. Hazardous materials abatement and demolition of Rasche Hall is complete. A second guaranteed maximum price (GMP) contract will be released in March 2014 for deep foundations and structural steel. A third GMP contract will be negotiated for finished construction of Rasche and the demolition and construction of Brodie as well as the demolition of Monteith and Thomas. Targeted completion is August 2015 for Rasche Hall and August 2016 for Brodie Hall.
				Barton Malow Company - Charlottesville, VA		

Project Name	Project Description	Estimated Total Project Cost	Non-General Funds	Project Team	Contract Completion Date	Project Status
CLOSE-OUT						
Center for the Arts	This project provided for design and construction of a new 92,000 GSF Performing Arts Center and the renovation of Shultz Hall for a 1,300-seat performance auditorium, a visual arts gallery, creative technologies program and support spaces.	\$100,087,000	\$72,700,448	Snohetta AS – New York, NY with STV Group, Inc. – Douglasville, PA	September 6, 2013	The project was substantially complete for occupancy on 8/21/13. The punch list is progressing for final completion.
				Holder Construction Company – Atlanta, GA		
Chiller Plant I	This project expanded the campus chilled water infrastructure and provided for the design and construction of a new 16,655 GSF chiller plant in the south west side of campus to serve the new Human and Agricultural Biosciences Building (HABBI) building and other buildings in the life sciences precinct.	\$20,097,729	\$8,039,092	Burns and Roe Service Corporation – Virginia Beach, VA	June 15, 2013	Building construction is substantially complete. Seasonal commissioning and spring landscape planting remain to finish the project. The potential for added distribution lines to increase load to the chiller plant is under evaluation.
				The Whiting-Turner Contracting Co. – Baltimore, MD		

CAPITAL CONSTRUCTION PROGRESS REPORT

Board of Visitors Meeting: *March 24, 2014*

LIFE SAFETY IMPROVEMENTS TO EXISTING BUILDINGS



FIRE ALARM SYSTEMS – Multiple Buildings

SCHEMATIC DESIGN IN PROGRESS



IMPROVE KENTLAND FACILITIES

5 MAJOR PROJECTS IN CONSTRUCTION

Agriculture Program Relocation

Human & Agricultural Biosciences I

Renovate Davidson Hall

Signature Engineering Building

Upper Quad Residence Halls



SITE WORK IN PROGRESS



AGRICULTURE PROGRAM RELOCATION

OPEN FOR BUSINESS



HUMAN & AGRICULTURAL BIOSCIENCES BUILDING I

WINTER HOKIE STONE CONSTRUCTION



RENOVATE DAVIDSON HALL

NEARING COMPLETION



SIGNATURE ENGINEERING BUILDING

DEMOLITION OF RASCHE HALL



UPPER QUAD RESIDENCE HALLS

Capital Project Information Summary – Renovation/Renew Academic Buildings

BUILDINGS AND GROUNDS COMMITTEE

March 24, 2014

Title of Project:

Renovate/Renew Academic Buildings

Location:

This renovation/renewal project includes three historic buildings located on the Drillfield: Davidson Hall-Front Section, Sandy Hall, and the Liberal Arts Building.

Current Project Status and Schedule:

The project is in the preliminary design phase. Subsequent design phases are expected to continue into the early fall of 2014. Construction is contingent upon state funding and design constraints, but is expected to begin September 2014.

Project Description:

The three academic buildings currently comprise a total 55,825 GSF (gross square feet).

- Davidson Hall-Front Section renovations include exterior repairs to masonry and window replacement and will fully rehabilitate the interior of the 28,688 GSF historic front section of the building for academic support.
- The 12,823 GSF Sandy Hall will receive a comprehensive interior renovation and rehabilitation of the building exterior, and a 4,800 GSF addition will be constructed on the Agriculture Quad (south) side of the building to provide additional academic support space, vertical egress circulation and accessible facilities.
- The 14,314 GSF Liberal Arts Building will receive a comprehensive interior renovation and rehabilitation of the building exterior, and a 2,000 GSF tower addition will be constructed on the northwest end of the building to provide vertical egress circulation and accessible facilities.

Brief Program Description:

The Davidson Hall renovation will include the administrative offices supporting the Department of Chemistry, and several Chemistry faculty offices.

The renovated Sandy Hall will comprise the College of Science Dean's Suite, Development and other administration offices, a distance learning room, and the Academy of Integrated Science.

The renovated Liberal Arts Building will house the administrative functions comprising the Dean of Liberal Arts Department, the Undergraduate Academic Affairs and Undergraduate Research Institute Offices.

Contextual Issues and Design Intent:

Exterior renovations will involve the repair, restoration and preservation of historic materials.

The additions to Sandy Hall and the Liberal Arts Building will primarily include Hokie stone in traditional random ashlar pattern installation, precast window and door surrounds, and slate shingles for sloping roofs. Window and door openings will repeat the pattern and scale found on the original historic building elevations. Sandy Hall and the Liberal Arts Building existing windows will be refurbished and interior insulating storm units added.

Non-original metal windows in Davidson Hall will be replaced with energy efficient clad wood windows matching profiles and designs of the original windows.

Architect/Engineer:

Glave and Holmes

Construction Manager:

Grunley

Design Preview for:

RENOVATE / RENEW ACADEMIC BUILDINGS

PROJECT LOCATION MAP



**Liberal Arts Building
Project Site**

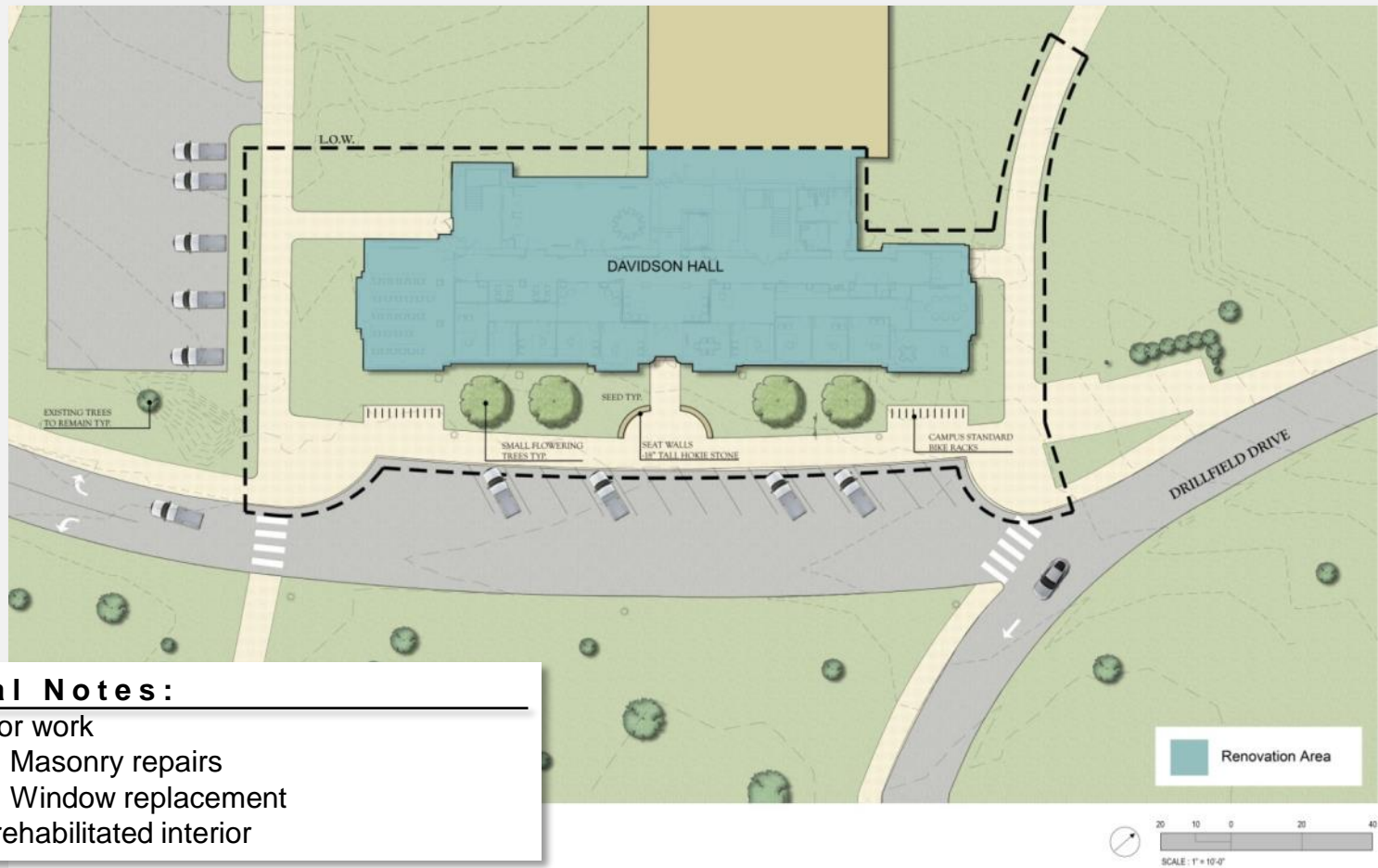
**Davidson Hall –
Front Section Project
Site**

**Sandy Hall Project
Site**

RENOVATE / RENEW ACADEMIC BUILDINGS

- 
- **Schematic design complete**
 - **Construction cost \$18.2 M = \$290/sf**
 - **Total project cost \$26.3 M = \$420/sf**
 - **Preliminary design submittal for cost review**

DAVIDSON HALL FRONT SECTION: Site Plan



General Notes:

- Exterior work
 - Masonry repairs
 - Window replacement
- Fully rehabilitated interior

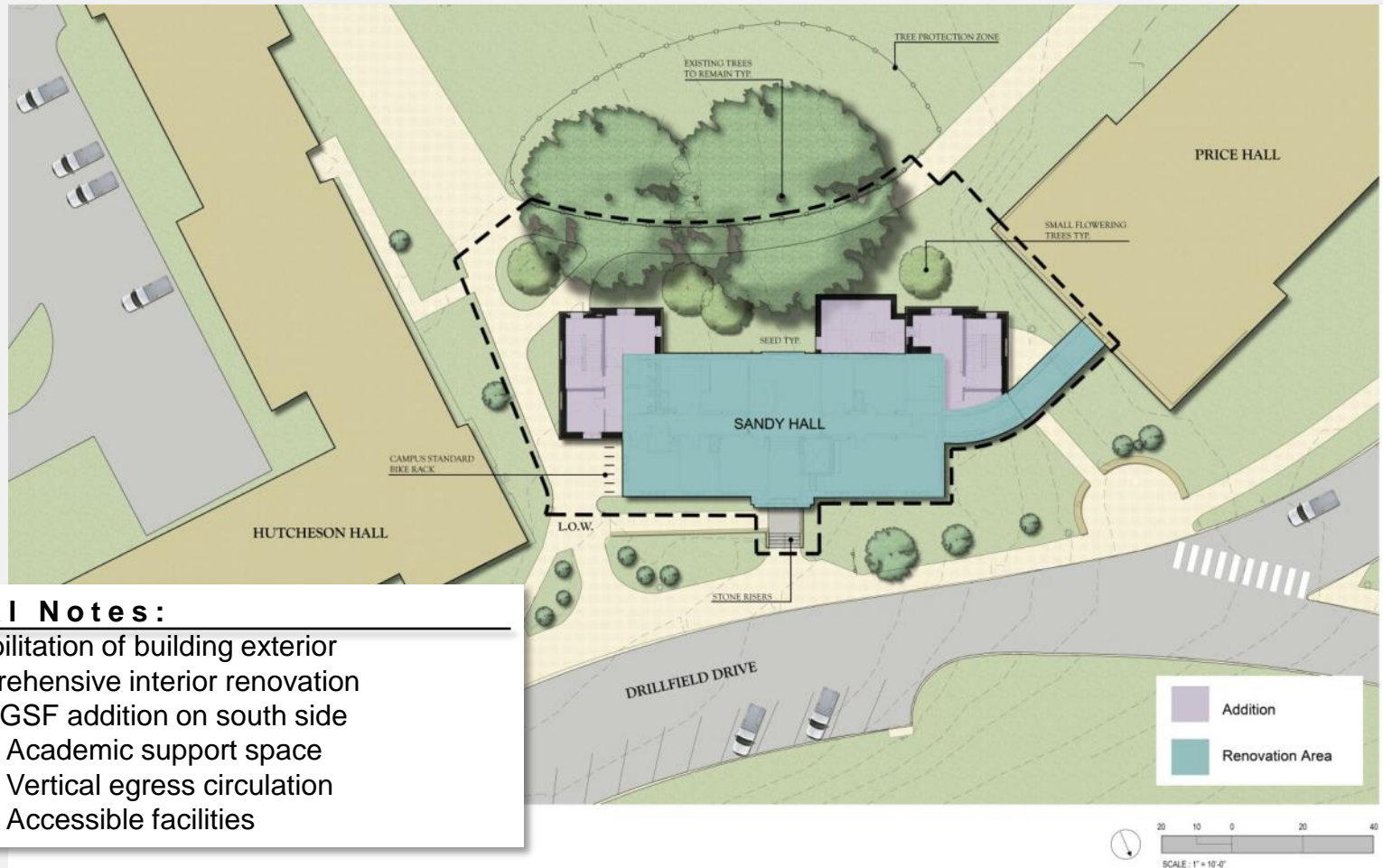
Site Plan
Davidson Hall
24 March 2014

RENOVATE / RENEW ACADEMIC BUILDINGS

Virginia Tech Board of Visitors



SANDY HALL: Site Plan



General Notes:

- Rehabilitation of building exterior
- Comprehensive interior renovation
- 4,800 GSF addition on south side
 - Academic support space
 - Vertical egress circulation
 - Accessible facilities

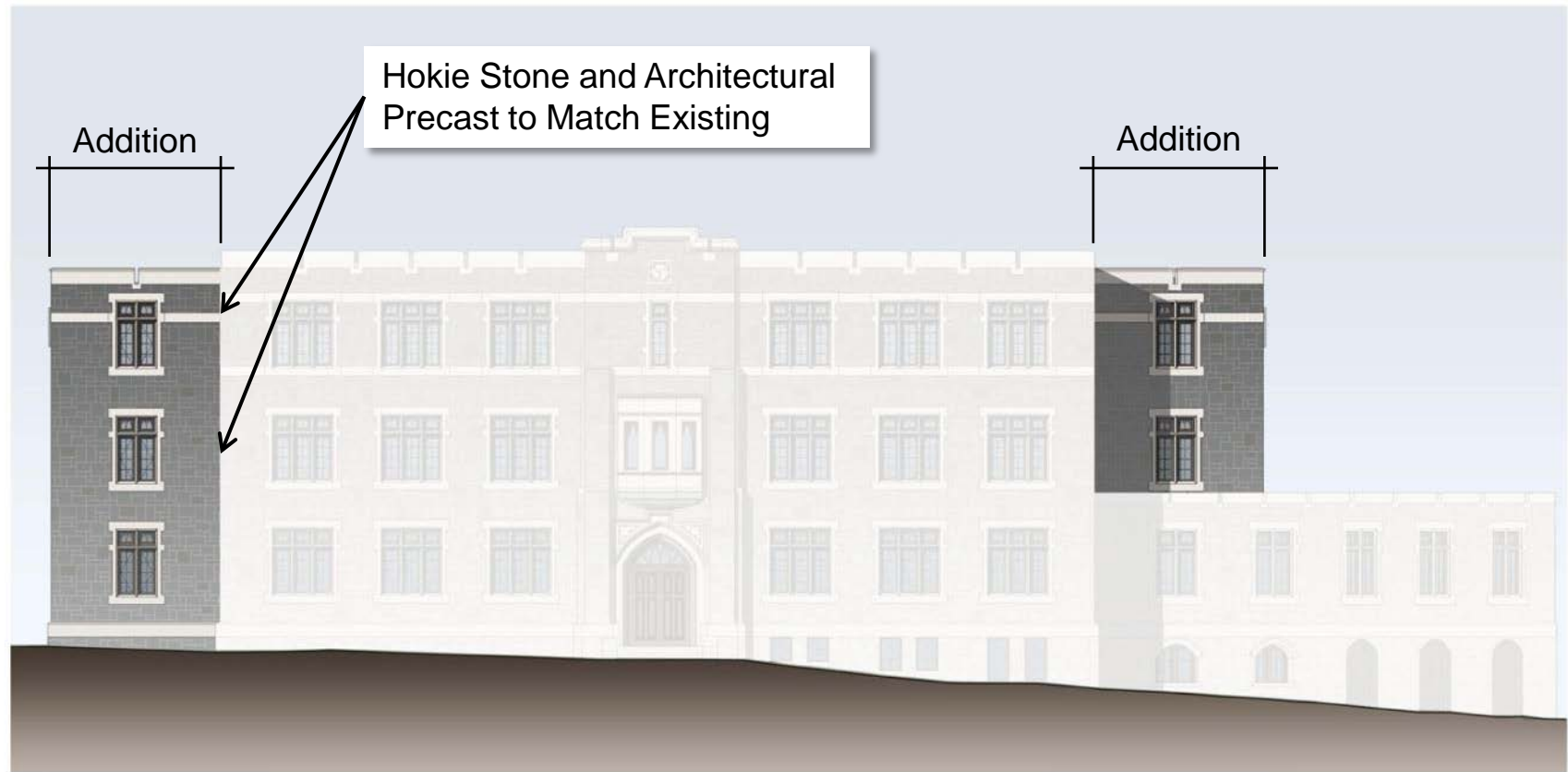
Site Plan
Sandy Hall
24 March 2014

RENOVATE / RENEW ACADEMIC BUILDINGS

Virginia Tech Board of Visitors



SANDY HALL: North Elevation



North Elevation
Sandy Hall
24 March, 2014

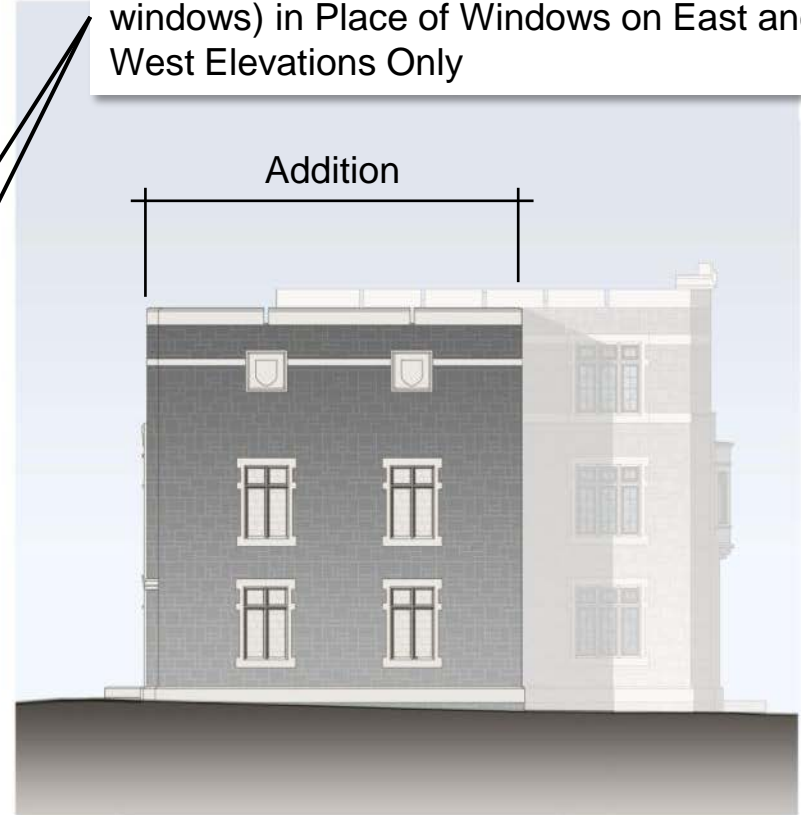
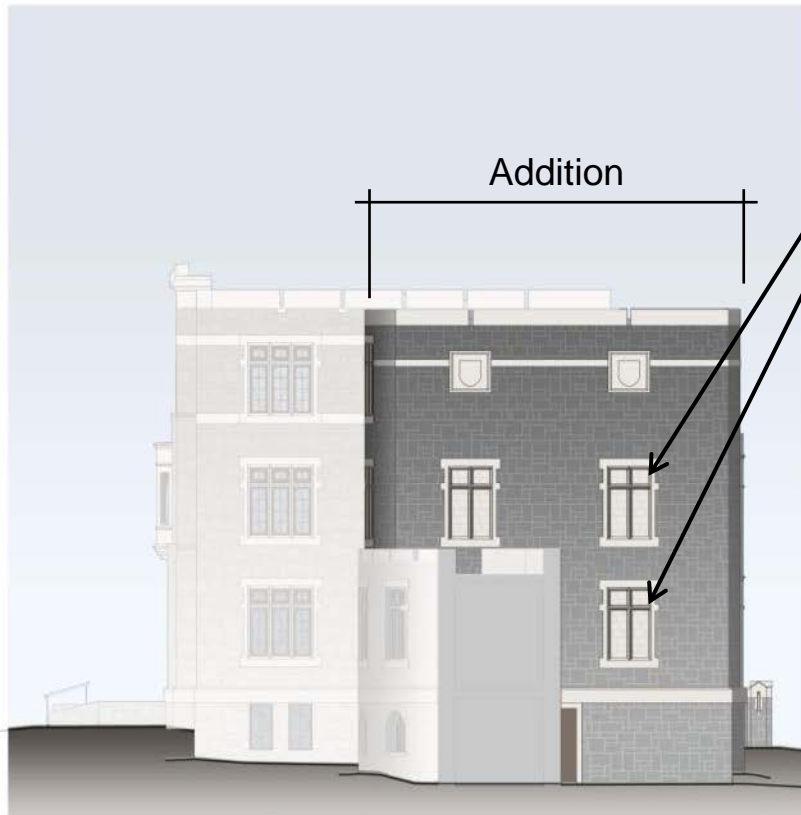
RENOVATE/RENEW ACADEMIC BUILDINGS
Virginia Tech Board of Visitors



RENOVATE / RENEW ACADEMIC BUILDINGS

SANDY HALL: West and East Elevations

Architectural Precast Elements (false windows) in Place of Windows on East and West Elevations Only



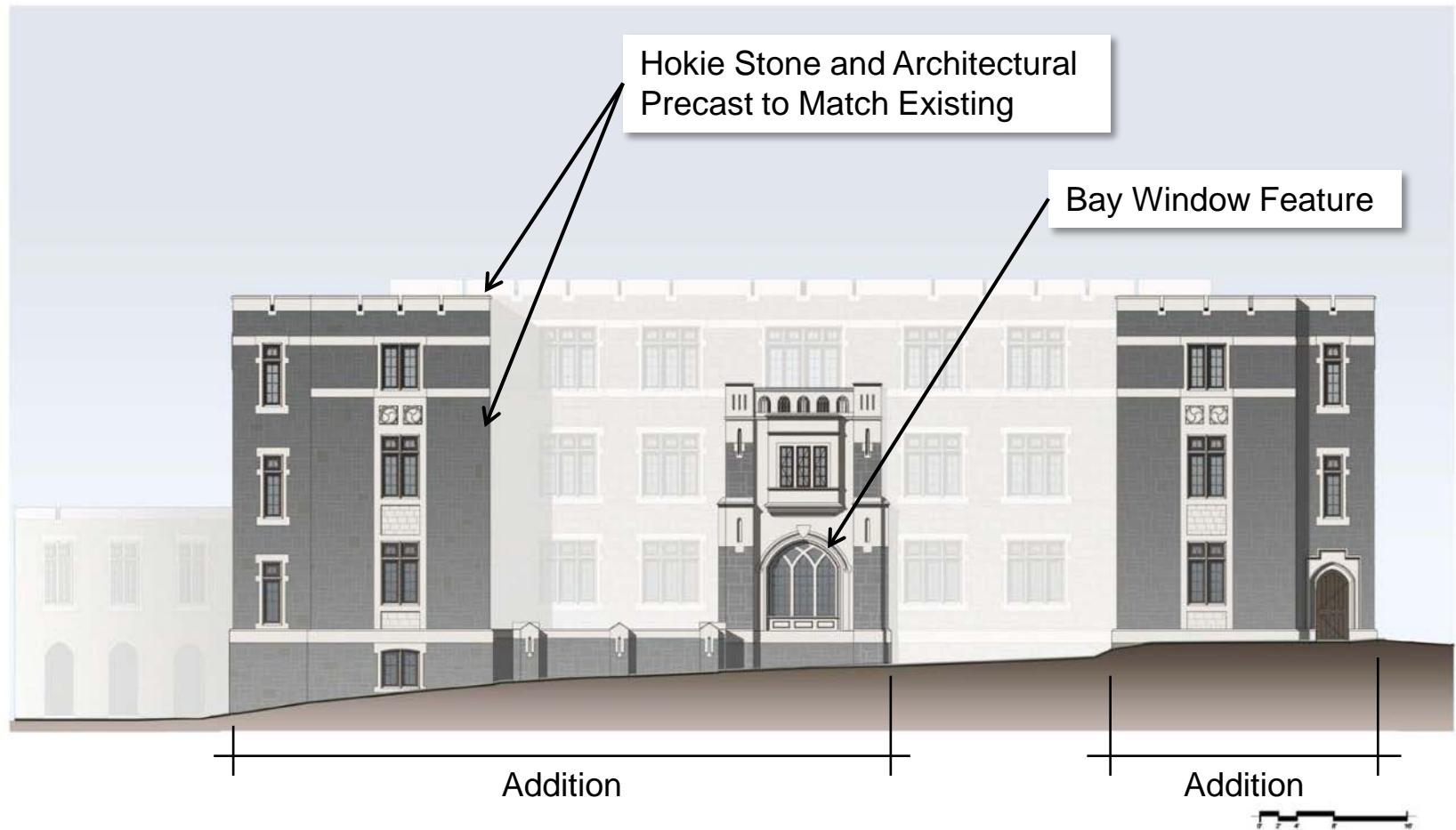
West and East Elevations
Sandy Hall
24 March, 2014

RENOVATE/RENEW ACADEMIC BUILDINGS
Virginia Tech Board of Visitors



RENOVATE / RENEW ACADEMIC BUILDINGS

SANDY HALL: South Elevation



South Elevation
Sandy Hall
24 March, 2014

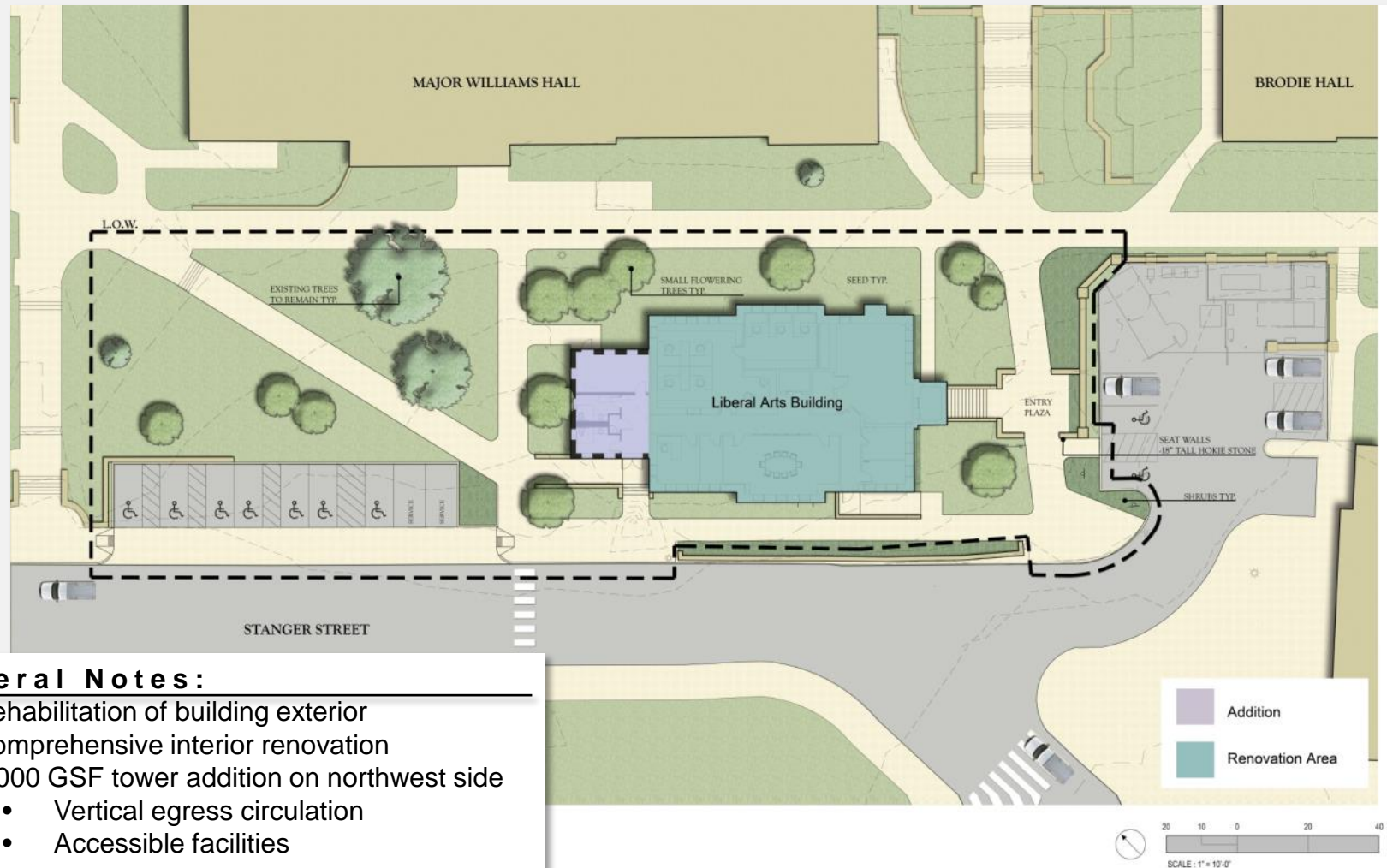
RENOVATE/RENEW ACADEMIC BUILDINGS

Virginia Tech Board of Visitors



RENOVATE / RENEW ACADEMIC BUILDINGS

LIBERAL ARTS BUILDING: Site Plan



Site Plan
Liberal Arts Building
24 March 2014

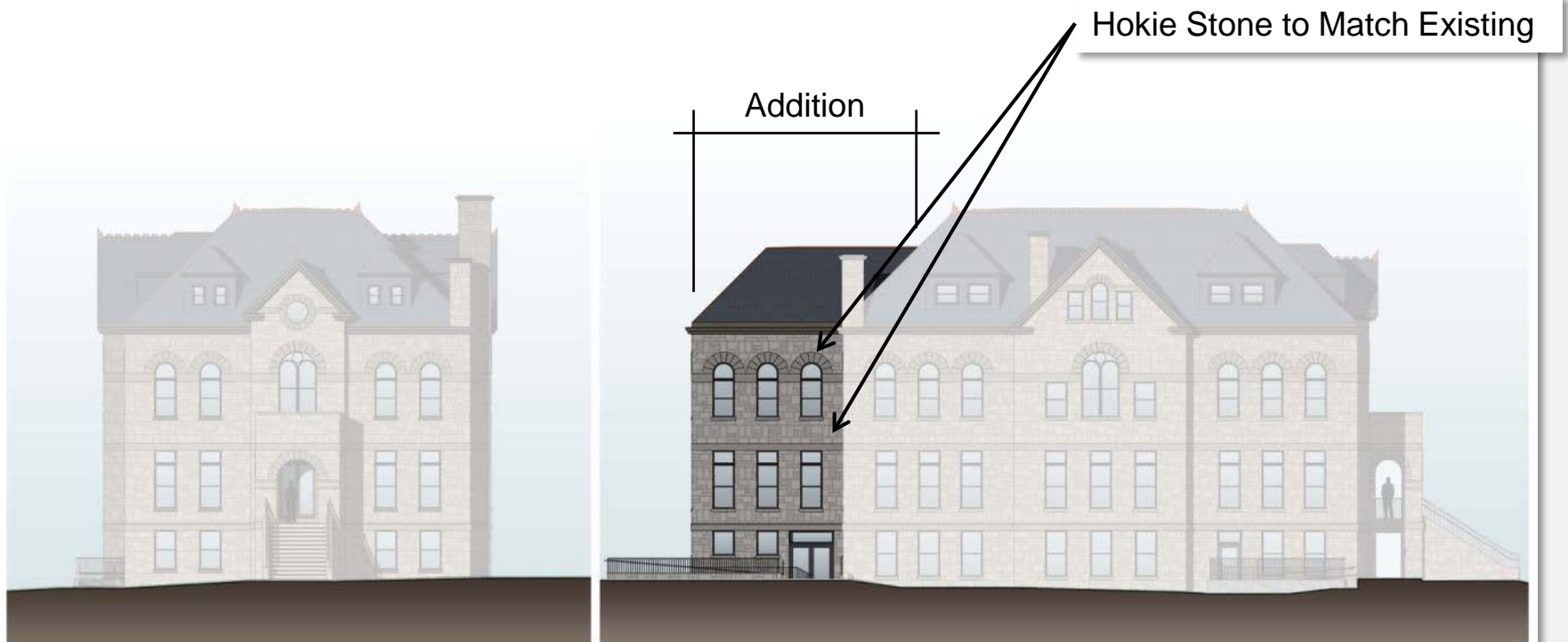
RENOVATE / RENEW ACADEMIC BUILDINGS

Virginia Tech Board of Visitors



RENOVATE / RENEW ACADEMIC BUILDINGS

LIBERAL ARTS BUILDING: South and West Elevations



South & West Elevations
Liberal Arts Building
24 March 2014

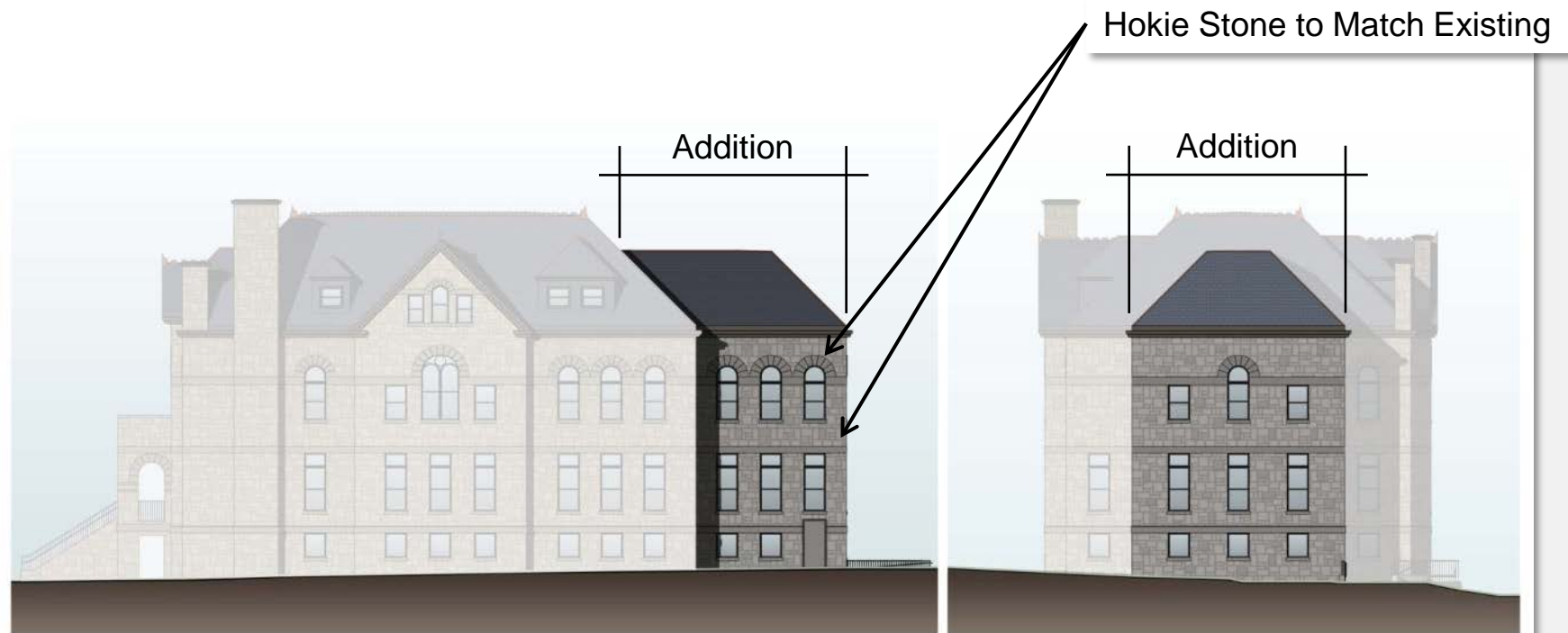
RENOVATE / RENEW ACADEMIC BUILDINGS

Virginia Tech Board of Visitors



RENOVATE / RENEW ACADEMIC BUILDINGS

LIBERAL ARTS BUILDING: East and North Elevations



East & North Elevations
Liberal Arts Building
24 March 2014

RENOVATE / RENEW ACADEMIC BUILDINGS

Virginia Tech Board of Visitors



RENOVATE / RENEW ACADEMIC BUILDINGS

Non-Capital Project Information Summary – Rescue Squad Vehicle Garage

BUILDINGS AND GROUNDS COMMITTEE

March 24, 2014

Title of Project:

Rescue Squad Vehicle Garage

Location:

A garage facility location was selected on the corner of Barger Street and Stanger Street, in close proximity to the existing Rescue Squad located in the lower level of the Military Building on Barger Street. This location continues the efficient access of Barger Street to Stanger Street and facilitates timely vehicle response to calls.

Current Project Status and Schedule:

The project is beginning the schematic design phase. Subsequent design phases are expected to continue through April 2014. Construction is estimated to be complete in December 2014.

Project Description:

This 1,050 gross square foot (GSF) garage at 30 feet wide by 35 feet deep will house two rescue squad vehicles serving the Virginia Tech Rescue Squad. The new garage will provide enclosed shelter for two vehicles currently being parked continuously outdoors. Additionally, these vehicles store items which require constant temperature control, so the vehicles currently run 24/7 or are plugged into exterior electrical outlets when not in operation. The new garage will greatly extend the service life of the emergency vehicles and the conditioned space will provide an efficiently controlled environment for sensitive equipment and supplies.

Brief Program Description:

The garage is sized to park two emergency vehicles side by side within the garage. A single full-width overhead coiling garage door will facilitate vehicle staging. A separate exterior door is provided for personnel access to and from the garage.

Contextual Issues and Design Intent:

Primary exterior materials will include fiber cement wall panels, faux Hokie Stone water table coursing, a vision window, an overhead coiling door with vision panels and a sloping standing seam metal roof.

Architect/Engineer:

Thomas Koontz Architect

Construction Manager:

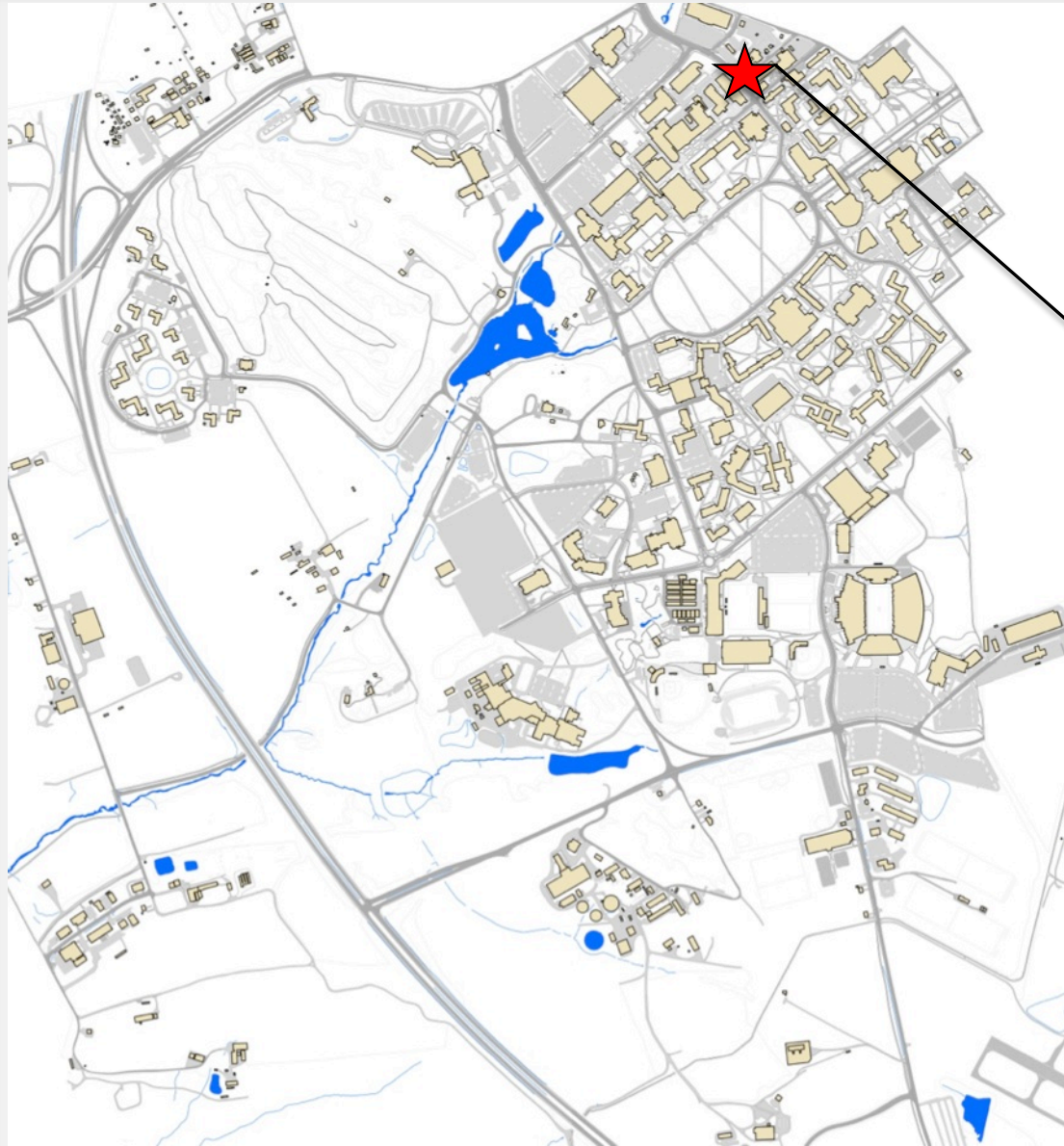
To be determined



Design Preview / Review for:

RESCUE SQUAD VEHICLE GARAGE

PROJECT LOCATION MAP



**Rescue Squad Vehicle
Garage Project Site**

RESCUE SQUAD VEHICLE GARAGE

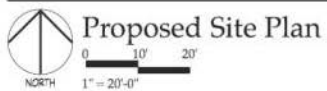
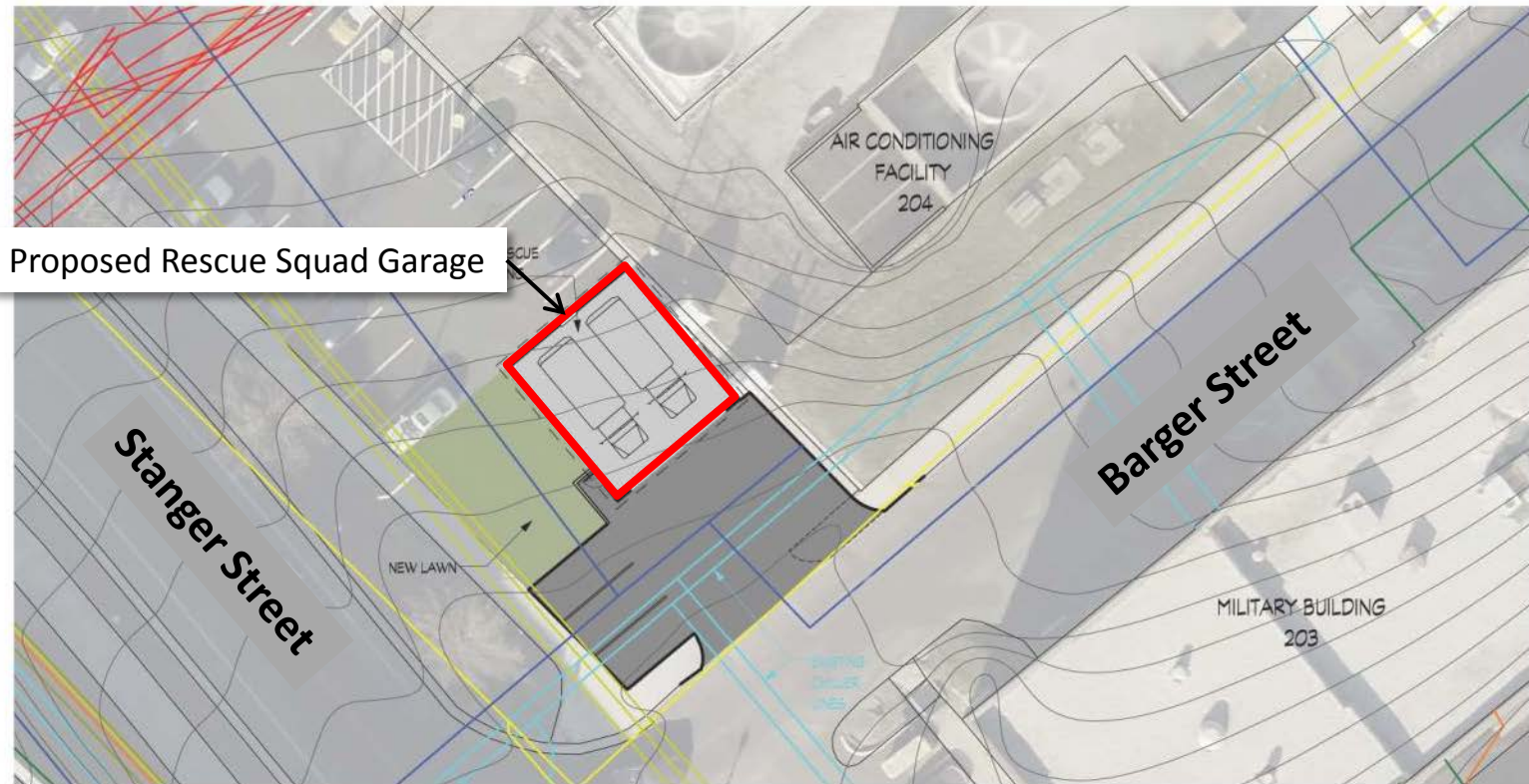
EXISTING VEHICLE PARKING CONDITION



Vehicle plugged in 24/7 to properly maintain sensitive supplies, which reduces vehicle life span

RESCUE SQUAD VEHICLE GARAGE

SITE PLAN



RESCUE SQUAD VEHICLE BUILDING
Virginia Tech
March 24, 2014

TKA THOMAS KOONTZ
ARCHITECT, PC

RECOMMENDATION FOR PROPOSED DESIGN

RECOMMENDATION:

That the design review graphics be approved and authorization be provided to continue with the project design consistent with the drawings shown, with an anticipated construction completion date of December 2014.

Capital Project Information Summary – Marching Virginians Practice Facility

BUILDINGS AND GROUNDS COMMITTEE

March 24, 2014

Title of Project:

Marching Virginians Practice Facility

Location:

A practice facility location was selected in close proximity to the existing Recreational Sports club sports fields located east of Research Center Drive. This location provides the efficiency and flexibility of allowing the Marching Virginians and club sports teams to benefit from shared use of a new artificial playing surface included in the program. This facility location is also convenient to Lane Stadium.

Current Project Status and Schedule:

The project is in the design development phase. Construction of the field is expected to be complete in late August 2014 and construction of the building is expected to be complete in early 2015.

Project Description:

This 8,400 gross square foot (GSF) facility is the first part of a phased, full facility build-out and includes core program elements necessary to facilitate practice and rehearsal activities. The first phase comprises a 4,350 GSF enclosed structure housing restrooms with lockers, an instrument storage room, a general storage room and a drum line room. Attached to the enclosed facility is a 4,050 GSF covered, open air pavilion for music practice in semi-circular seating arrangements. The sizing, location and adjacency of each space and room in this first phase construction will be specifically designed to accommodate the future additions shown in the later phases of build-out. This includes the pavilion roof constructed at a height to accommodate the future enclosed band rehearsal room. The new adjacent artificial turf field is a regulation soccer-size field, permanently striped, and has sidelines on each side. Field lighting will be provided and the existing Marching Virginians Conductor's Tower may be relocated to this field.

Brief Program Description:

The practice facility will provide a covered, protected area from the elements for full member band rehearsals, and dedicated, conditioned spaces for wind instrument storage, percussion instrument storage, general storage, and restroom/locker room.

Contextual Issues and Design Intent:

Primary exterior materials will include fiber cement wall panels, split face Construction Masonry Unit (CMU), Hokie Stone projected columns, operable windows, and overhead coiling doors. A sloping standing seam metal roof will provide the cover over the open air pavilion and a painted metal steel frame structure will support the pavilion roof.

Architect/Engineer: Thompson & Litton

Construction Manager: To be determined



Design Preview / Review for:

MARCHING VIRGINIANS PRACTICE FACILITY

PROJECT LOCATION MAP

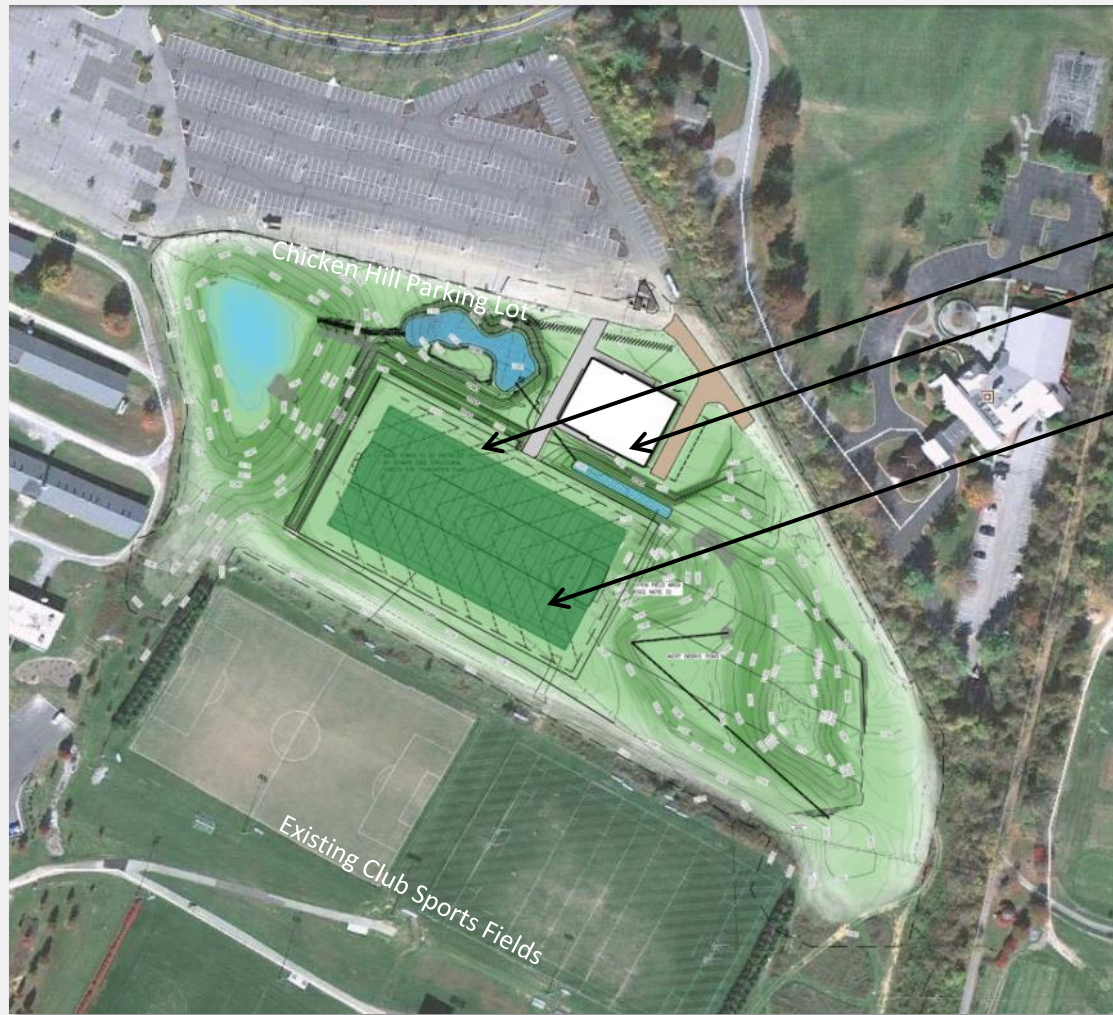


**Marching Virginians
Practice Facility Project
Site**

MARCHING VIRGINIANS PRACTICE FACILITY

- 
- **Design–Bid–Build project delivery**
 - **Artificial turf field design complete**
 - **Building design complete**
 - **Bid construction for contract award spring 2014**
 - **Targeted completion:**
 - Field - October 2014**
 - Building - early 2015**

SITE PLAN



Relocated Conductor's Tower

Marching Virginians Facility

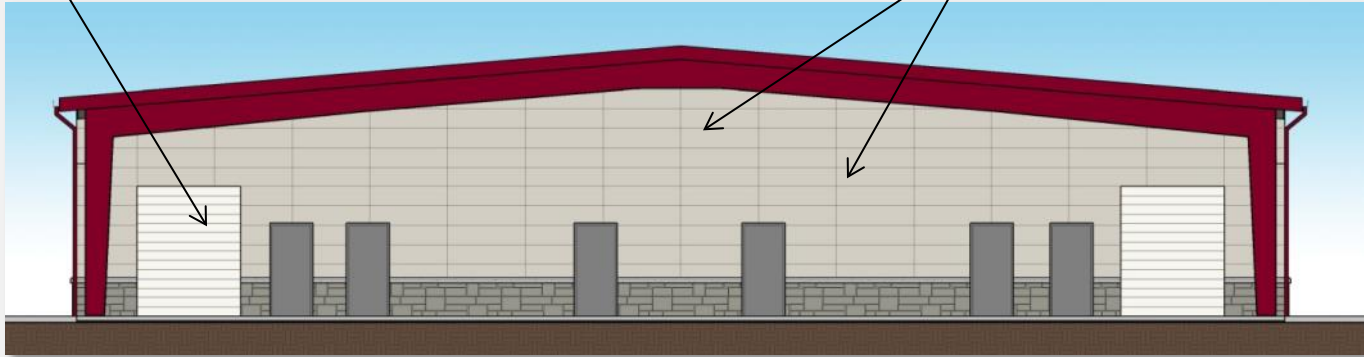
New Artificial Turf Field

MARCHING VIRGINIANS PRACTICE FACILITY

ELEVATIONS

Overhead Coiling Door

Fiber Cement Panels



South Elevation

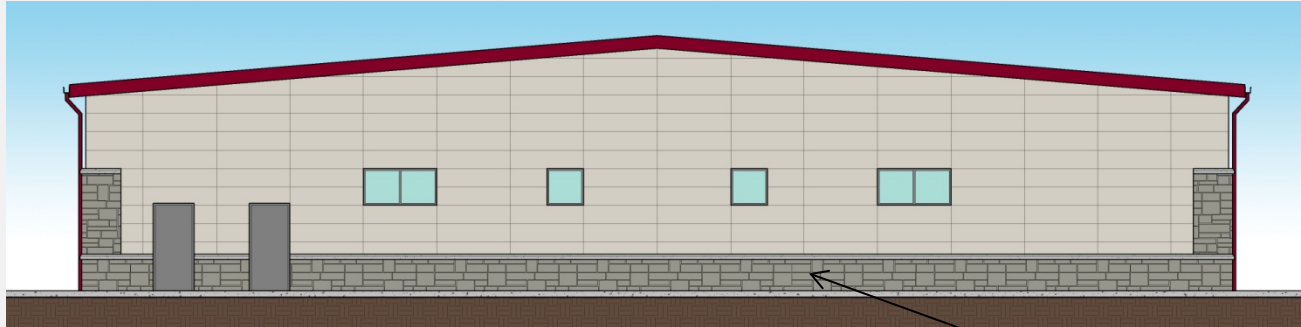
Standing Seam Metal Roof



West Elevation

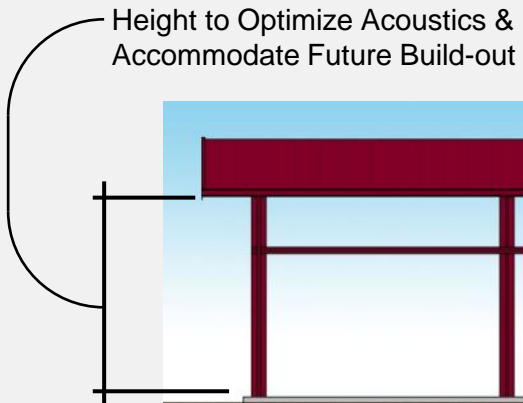
Painted Metal
Columns & Bracing

ELEVATIONS



North Elevation

Faux Hokie Stone Water Table



East Elevation

MARCHING VIRGINIANS PRACTICE FACILITY

RECOMMENDATION FOR PROPOSED DESIGN

RECOMMENDATION:

That the design review graphics be approved and authorization be provided to continue with the project design consistent with the drawings shown, with an anticipated field construction completion date of fall 2014 and a building construction completion date of early 2015.

Capital Project Information Summary – Classroom Building

BUILDINGS AND GROUNDS COMMITTEE

March 24, 2014

Title of Project:

Classroom Building

Location:

The 2006 Master Plan Update identified a classroom building to be placed in the Derring Lot near the corner of West Campus Drive and Perry Street. With the planned expansion of undergraduate academic and instructional research facilities into the B Lot (North Precinct), this site was identified as a prime location due to close proximity to existing undergraduate academic buildings north of the Drillfield.

Current Project Status and Schedule:

The project is in the construction document phase, which is expected to last through the summer of 2014. Construction is contingent upon state funding, but is expected to begin in October 2014. A “preview” of the preliminary design drawings was approved at the June 2013 Board of Visitors Building and Grounds Committee Meeting.

Project Description:

The 73,275 gross square foot (GSF), three story classroom building will include 15 classrooms and four laboratories. The facility will offer combinations of dividable and flexible arrangement: medium size classrooms, large dividable classrooms, tiered lecture halls, SCALE-UP classrooms, interdisciplinary science instructional labs, and a combination of open and private study rooms.

Brief Program Description:

The classroom building will provide state of the art, flexible instructional classrooms configured to facilitate group work and to support new instructional technologies now being implemented across campus. The building will seat over 1,600 students. With thousands of students using the building daily, multiple study rooms and public meeting/collaborative spaces that facilitate interaction are provided throughout the building.

Contextual Issues and Design Intent:

Primary exterior materials will include Hokie Stone, precast concrete, decorative metal spandrel panels, and curtainwall and operable windows in keeping with recent contemporary collegiate gothic buildings constructed on campus. A prominent circulation tower is the focal point for the north campus entry, serving as a first-view building landmark upon entering campus from Prices Fork Road.

Architect/Engineer:

Einhorn Yaffee Prescott

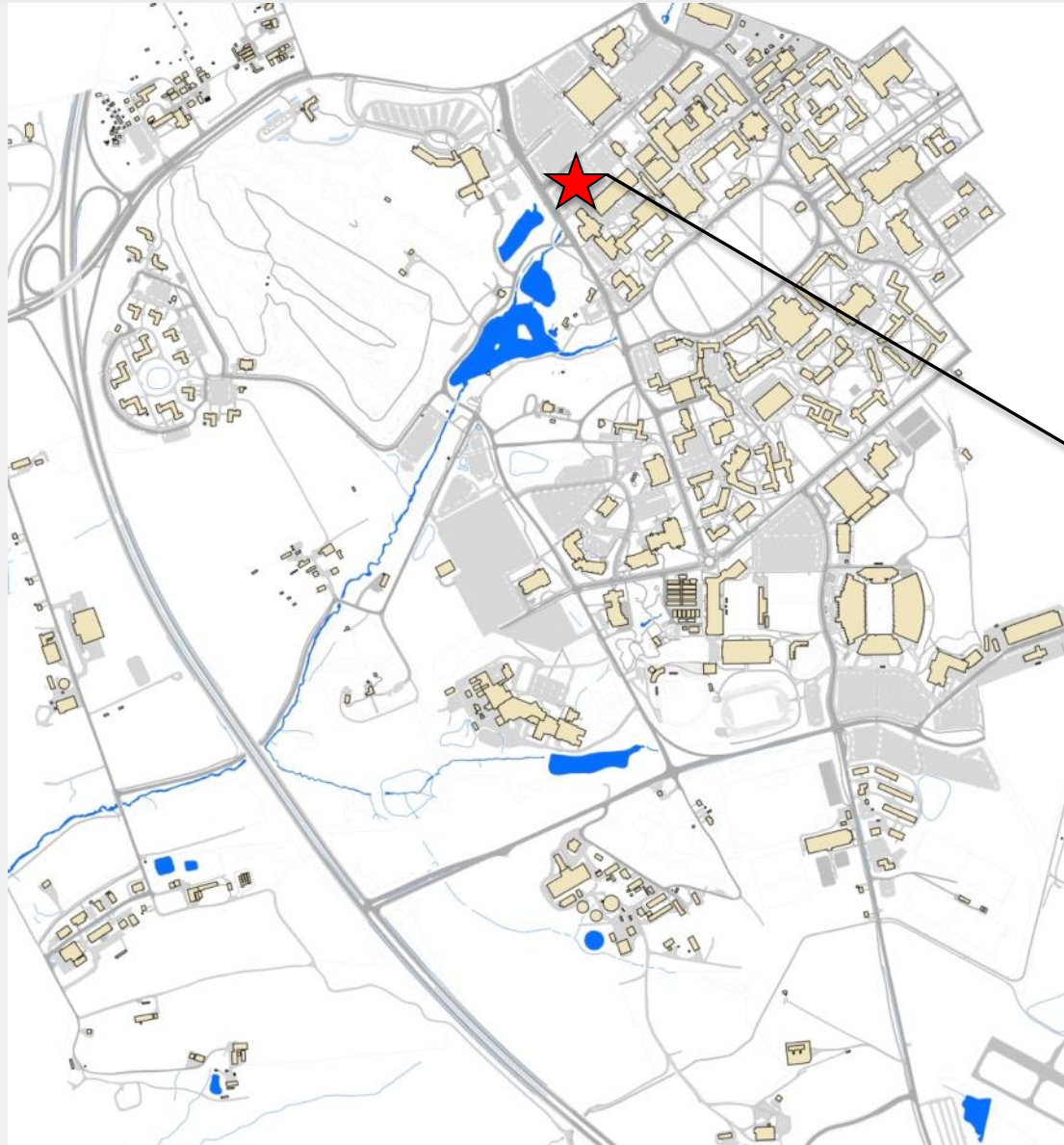
Construction Manager:

W. M. Jordan

Design Review for:

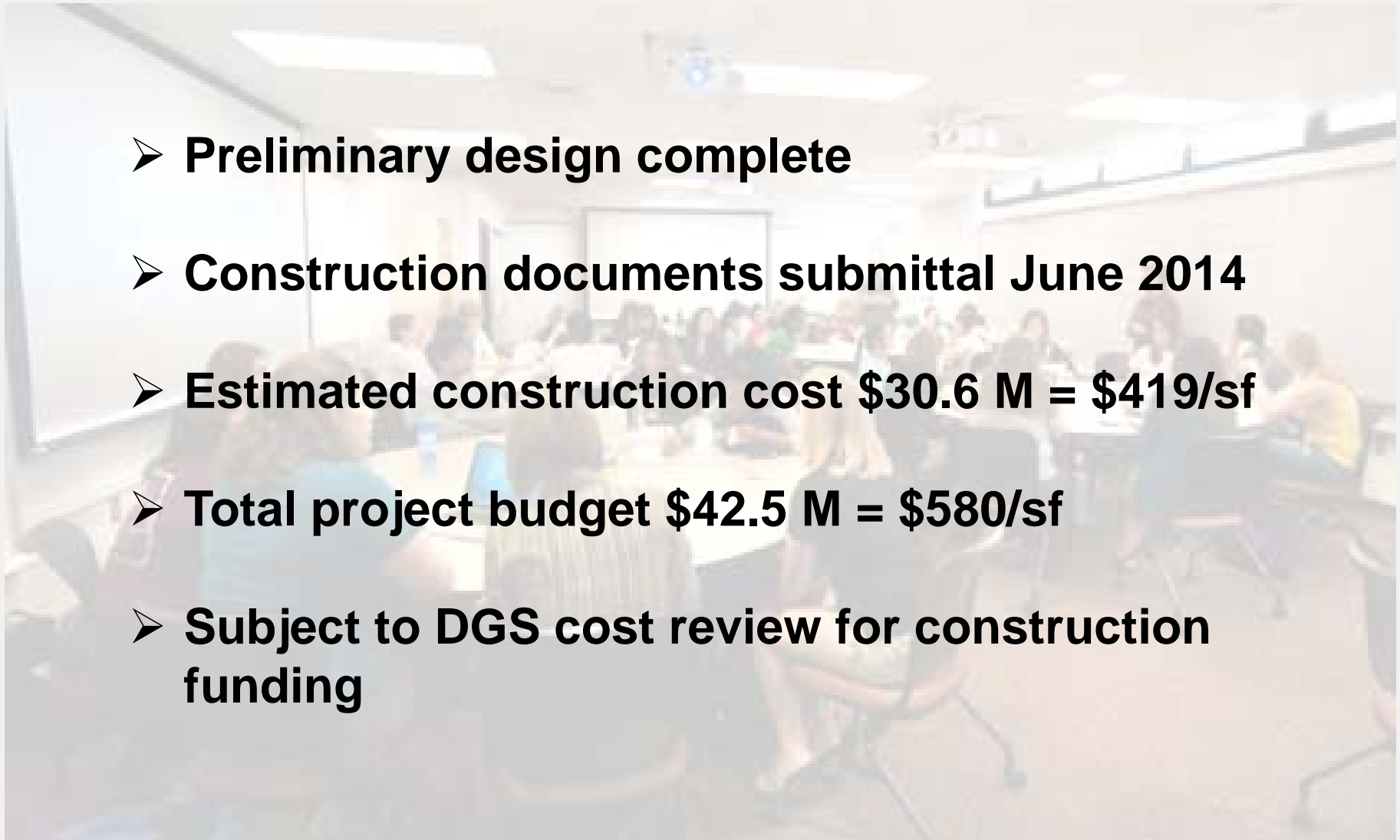
CLASSROOM BUILDING

PROJECT LOCATION

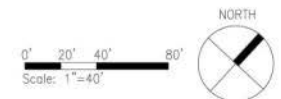


**Classroom Building
Project Site**

CLASSROOM BUILDING

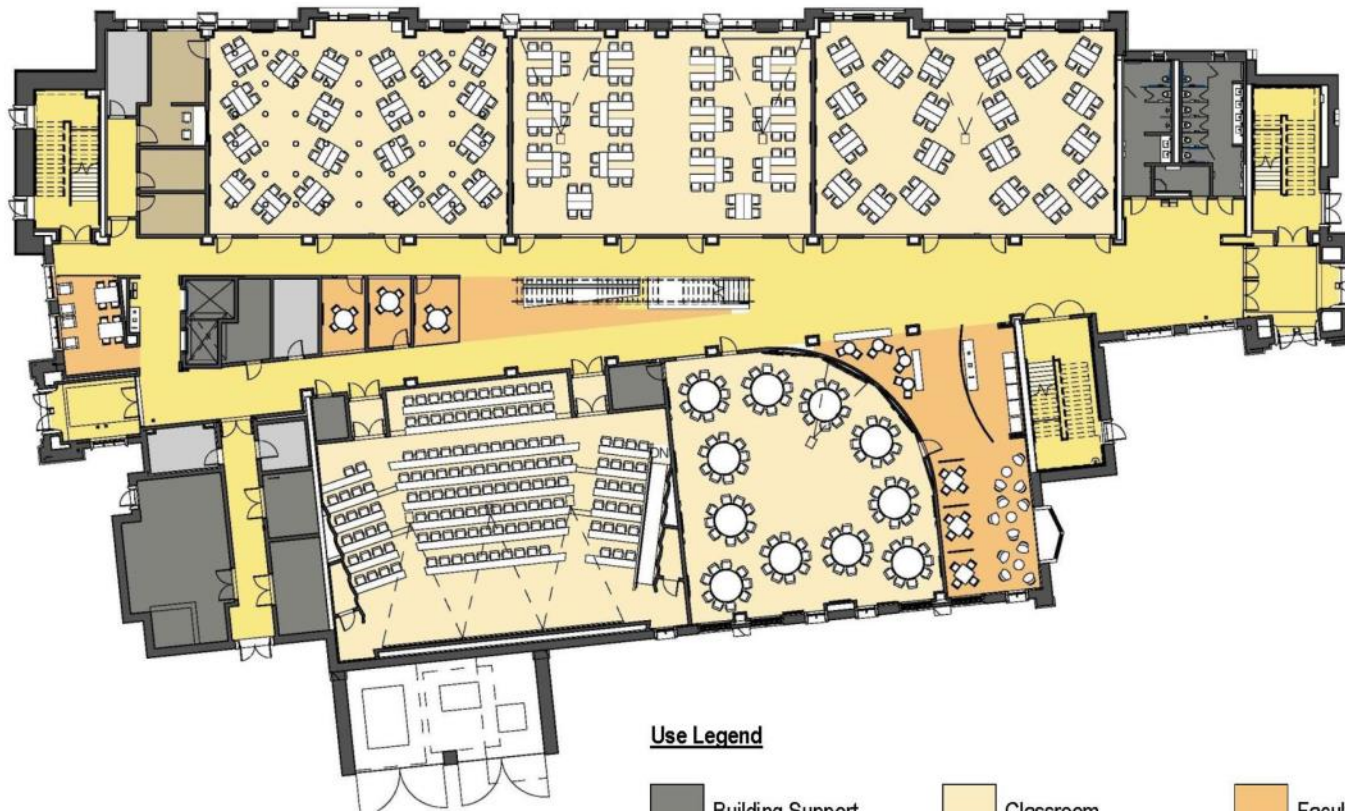
- 
- **Preliminary design complete**
 - **Construction documents submittal June 2014**
 - **Estimated construction cost \$30.6 M = \$419/sf**
 - **Total project budget \$42.5 M = \$580/sf**
 - **Subject to DGS cost review for construction funding**

SITE PLAN









CLASSROOM BUILDING

FIRST FLOOR PLAN



Use Legend

	Building Support		Classroom		Faculty/Student Support
	Circulation		Dedicated Support		Teaching Lab

EYP/

First Floor Plan
Virginia Polytechnic Institute and State University
NEW CLASSROOM BUILDING

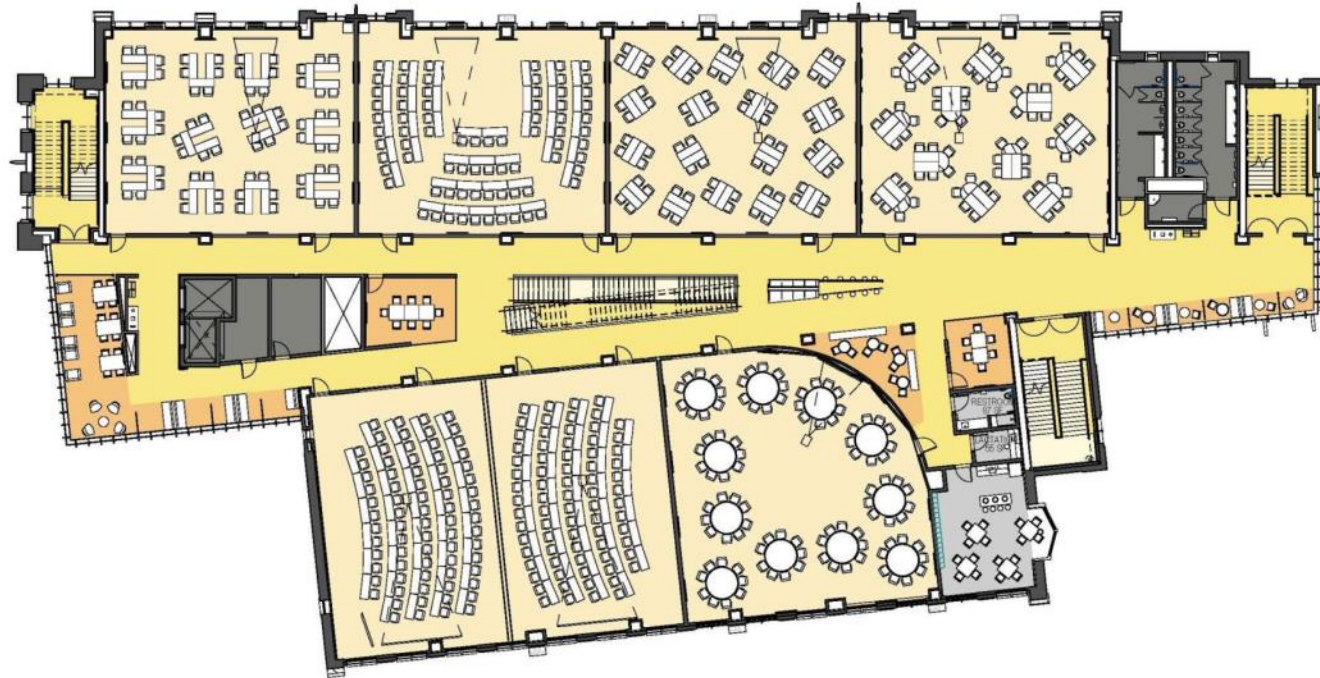
3/64" = 1'-0"
05/14/2013




© 2013 EYP Inc.

CLASSROOM BUILDING

SECOND FLOOR PLAN



Use Legend

	Building Support		Classroom		Faculty/Student Support
	Circulation		Dedicated Support		Teaching Lab

EYP/

Second Floor Plan
Virginia Polytechnic Institute and State University
NEW CLASSROOM BUILDING

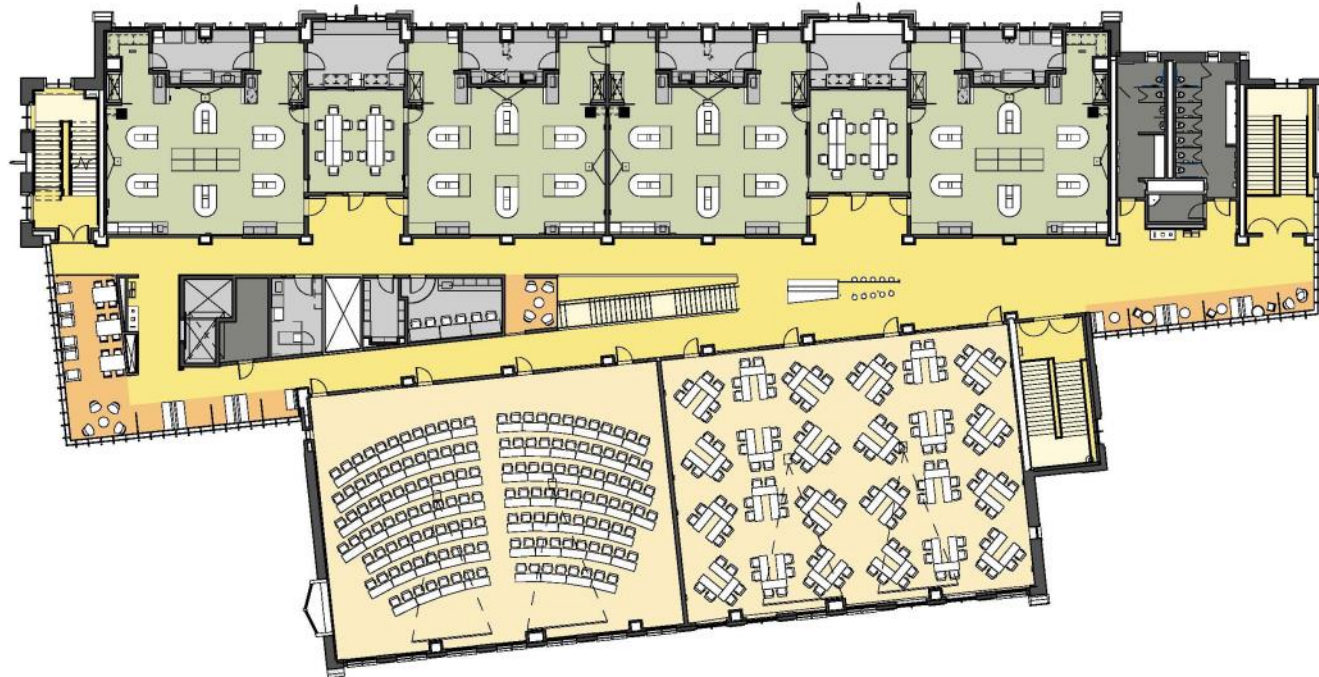
3/64" = 1'-0"
05/14/2013

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CLASSROOM BUILDING

THIRD FLOOR PLAN



Use Legend

	Building Support		Classroom		Faculty/Student Support
	Circulation		Dedicated Support		Teaching Lab

EYP/

Third Floor Plan
Virginia Polytechnic Institute and State University
NEW CLASSROOM BUILDING

3/64" = 1'-0"
05/14/2013



© 2013 EYP, INC.

CLASSROOM BUILDING

RECOMMENDATION FOR PROPOSED DESIGN

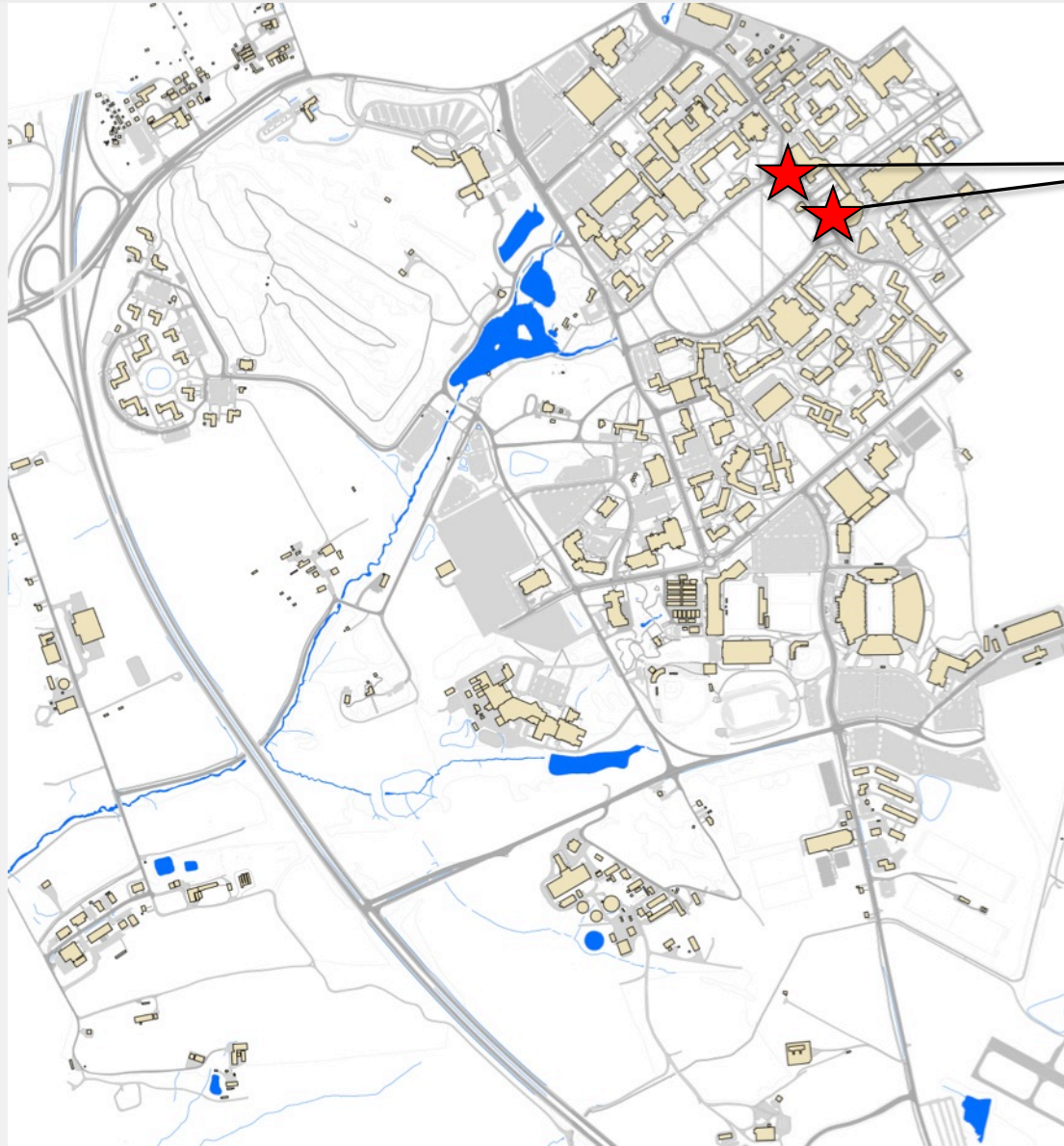
RECOMMENDATION:

That the design review graphics be approved and authorization be provided to continue with the project design consistent with the drawings shown, with an anticipated construction start date of October 2014, contingent upon state funding.

Concept Review on:

DRILLFIELD ROAD IMPROVEMENTS

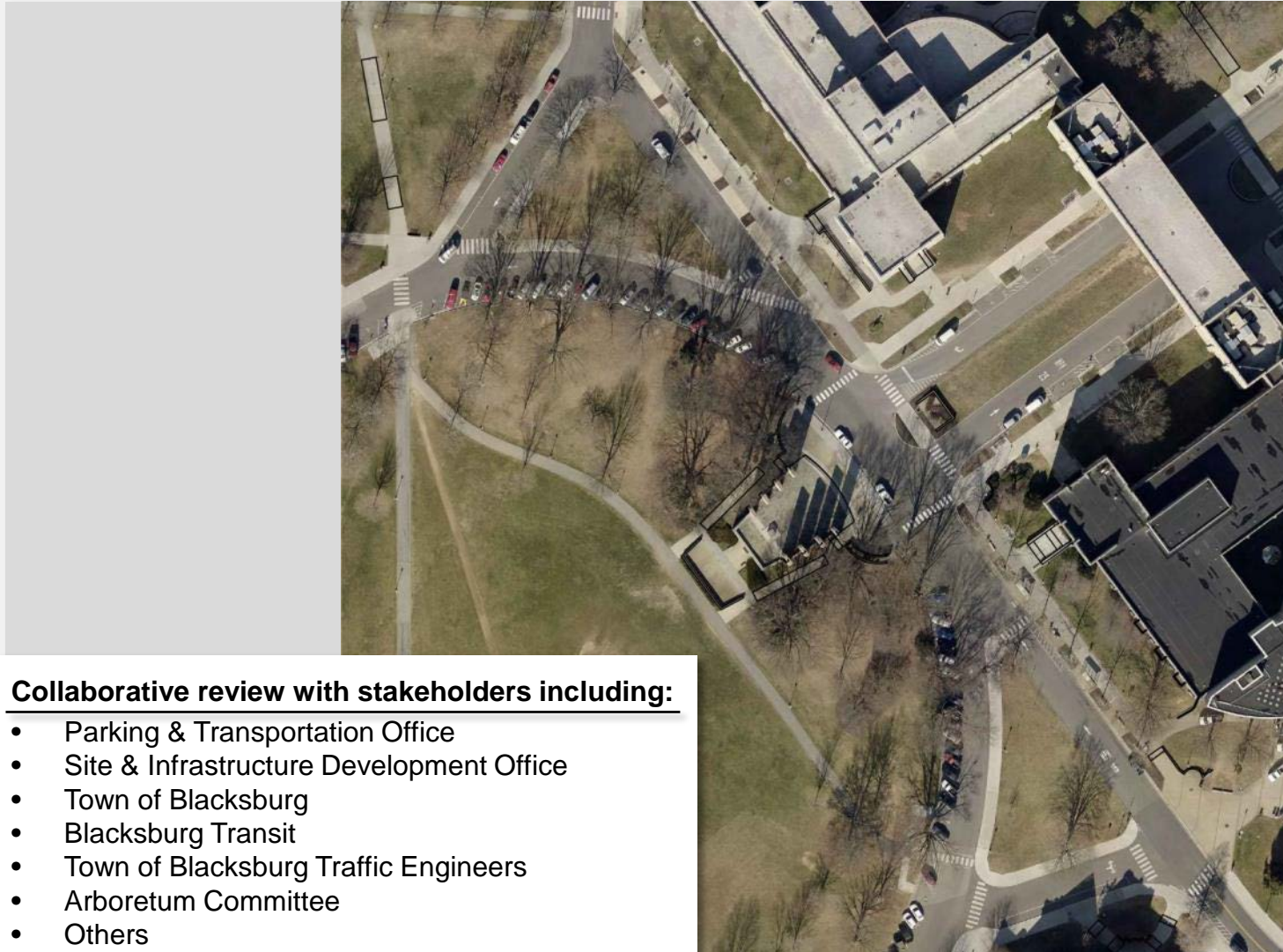
LOCATION MAP



Project Site

DRILLFIELD ROAD IMPROVEMENTS

EXISTING AERIAL PHOTO



Collaborative review with stakeholders including:

- Parking & Transportation Office
- Site & Infrastructure Development Office
- Town of Blacksburg
- Blacksburg Transit
- Town of Blacksburg Traffic Engineers
- Arboretum Committee
- Others

DRILLFIELD ROAD IMPROVEMENTS

SITE PLAN



Notes

- Creates north / south corridor, connecting Stanger St. & Kent St.
- Provides left turn from Alumni Mall to access Kent St.
- Reduces vehicle traffic on Drillfield Dr.
- Total parking loss: 4 spaces

UPPER DRILL FIELD TRAFFIC IMPROVEMENTS- REVISED

Virginia Tech Office of University Planning Not to scale 02/04/2014

DRILLFIELD ROAD IMPROVEMENTS

RECOMMENDATION FOR PROPOSED DESIGN

RECOMMENDATION:

That the concept review graphics be approved and authorization be provided to continue with the project design consistent with the drawings shown.

Capital Project Information Summary – Indoor Athletic Practice Facility

BUILDINGS AND GROUNDS COMMITTEE

March 24, 2014

Title of Project:

Indoor Athletic Practice Facility

Location:

The building site encompasses the east exterior football practice field between Lane Stadium and the Football Locker Room Facility, while maintaining the west exterior football practice field for athletic use during and after construction of the facility. The woods east of the facility site will be protected from construction activities both during and after construction.

Current Project Status and Schedule:

Schematic design documents have been prepared as part of the design-build procurement design package. Subsequent design phases are expected to be completed in September 2014 and construction complete no later than July 2015.

Project Description:

The 85,225 gross square foot (GSF) facility provides a 210' x 400' clear indoor practice space including 25' wide sideline dimensions and 20' extensions beyond the end zones. Clerestory glazing will be provided beneath the roofline to maximize natural daylighting, and metal halide lighting will be provided near the ceiling to simulate Lane Stadium conditions. To allow rapid transition between the exterior and interior field areas the building's west-side will have a continuous line of overhead glazed doors to 'open up' the full length of the building. The east-side of the facility will maintain pedestrian movement and will facilitate an enhanced game day experience.

Brief Program Description:

The practice facility will provide an enclosed artificial turf practice field serving a number of Olympic sports programs and the football program. Support spaces include a hydration room, storage space for practice and strength/conditioning equipment and, unisex restrooms. A staircase leads to an elevated mezzanine serving a coaches platform for viewing the indoor and the exterior practice fields, and a raised video platform for interior and exterior filming will also be provided.

Contextual Issues and Design Intent:

Primary exterior materials will include Hokie Stone, precast concrete with decorative reveals, metal louvers, curtainwall glazing and standing seam metal roofing in a barrel vault shape. Exposed barrel shaped metal box trusses support the walls and span the ceiling, and large expanses of side and end walls are available for super graphics.

Architect/Engineer:

HKS

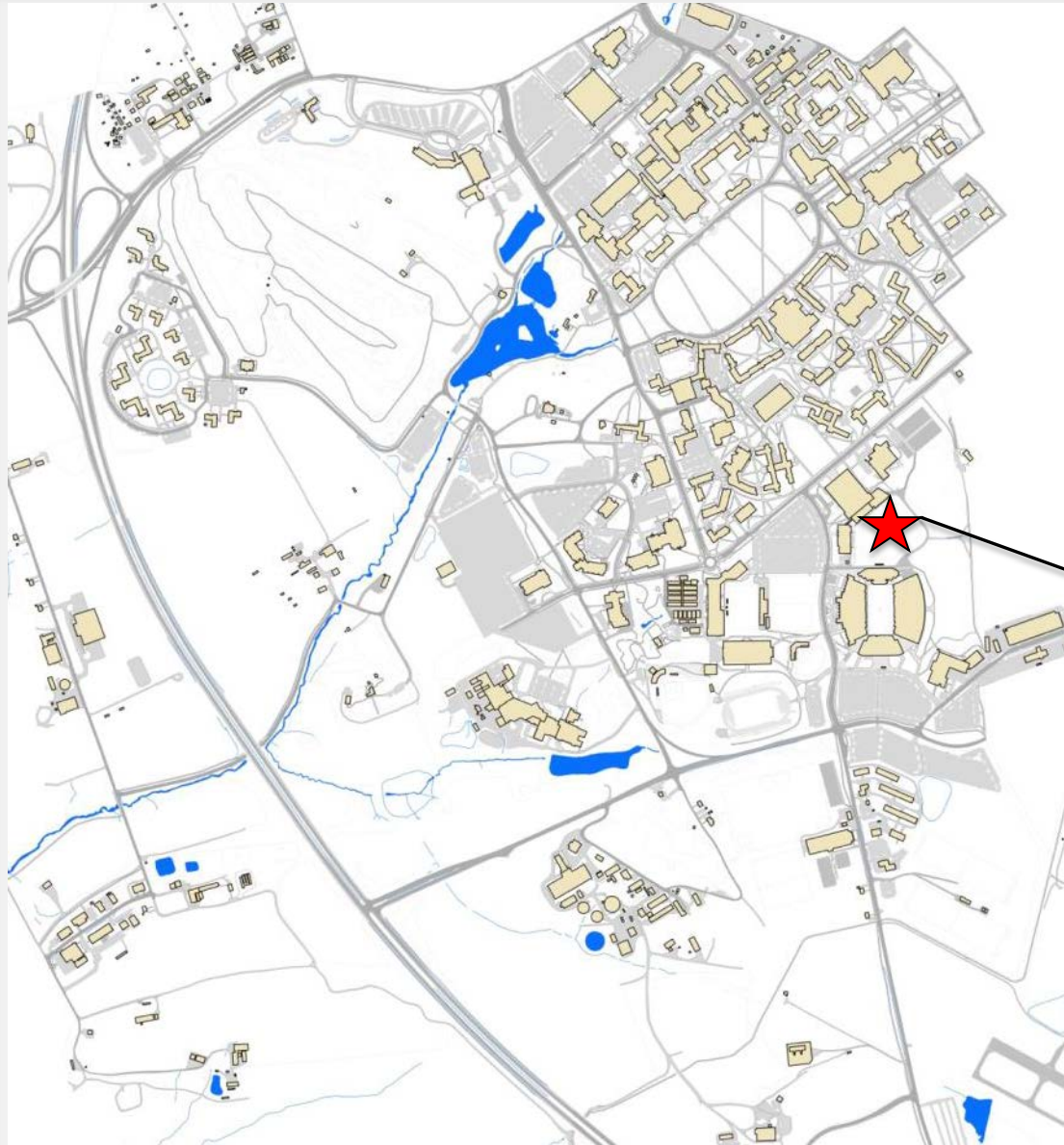
Construction Manager:

W. M. Jordan

Design Preview / Review for:

INDOOR ATHLETIC PRACTICE FACILITY

PROJECT LOCATION MAP

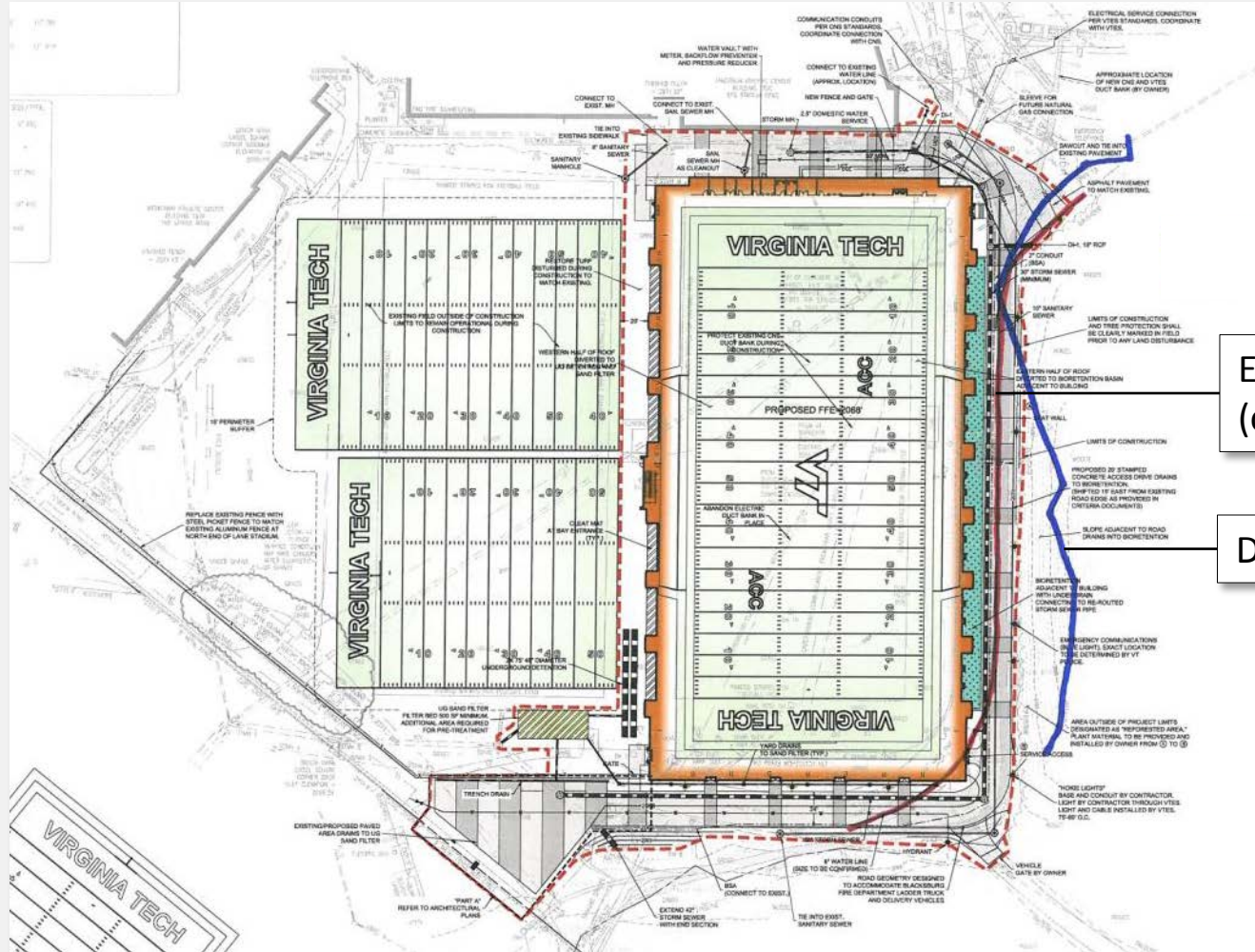


**Indoor Athletic Practice
Facility Project Site**

INDOOR ATHLETIC PRACTICE FACILITY

- 
- **Request for proposals for Design-Build project delivery**
 - **Four teams short-listed**
 - **Interviews conducted in February 2014**
 - **Contract negotiation with top ranked team**

SITE PLAN



Existing Road Line
(orange)

Drip Line (blue)

NOTE

- Area of disturbance is outside of Stadium Woods

INDOOR ATHLETIC PRACTICE FACILITY

RECOMMENDATION FOR PROPOSED DESIGN

RECOMMENDATION:

That the design review graphics be approved and authorization be provided to continue with the project design consistent with the drawings shown, with an anticipated construction completion date of July 2015 (or earlier).

RESOLUTION ON DEMOLITION OF UNIVERSITY BUILDING 433J

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has the authority to approve the disposition of any building; and

WHEREAS, a quonset hut structure outfitted for office and research use, building number 433J, located in Blacksburg is in poor condition and uneconomical to repair; and

WHEREAS, the university will obtain the approvals of the Art and Architecture Review Board and the Department of Historic Resources for the demolition of this building prior to demolition;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors approve the demolition of building number 433J, located in Blacksburg, in accordance with the applicable statutes of the Code of Virginia (1950), as amended.

RECOMMENDATION:

That the above resolution authorizing the demolition of building number 433J be approved.

March 24, 2014



Building 433J East Elevation



Building 433J North Elevation



Building 433J Interior



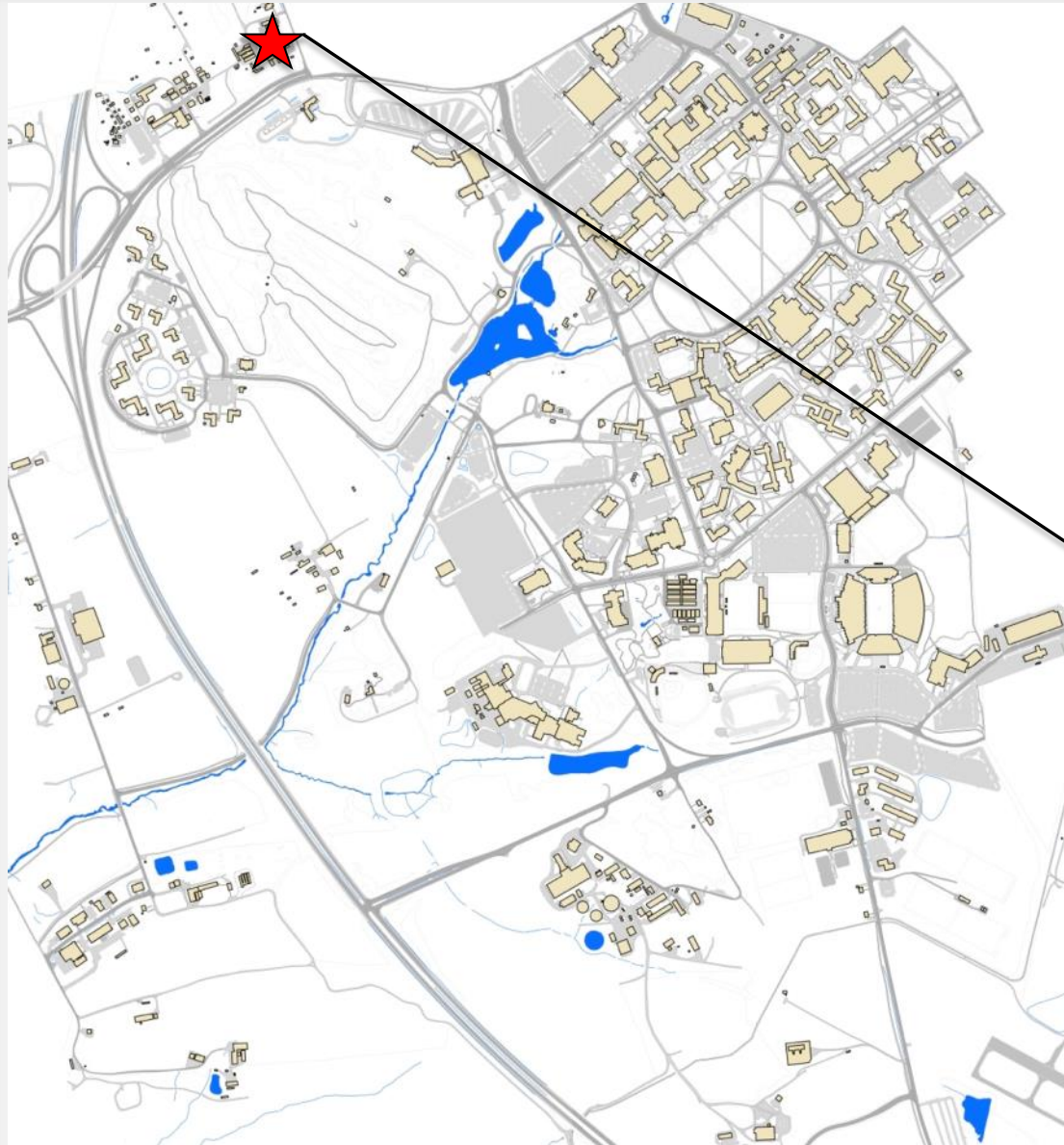
Building 433J Interior

Resolution on:

**DEMOLITION OF UNIVERSITY
BUILDING 433J**

BUILDING LOCATION MAP

Attachment F



**Glade Road Facility
Location**

DEMOLITION OF UNIVERSITY BUILDING 433J

EXTERIOR BUILDING PHOTOS

Attachment F



East Elevation



North Elevation



West Elevation

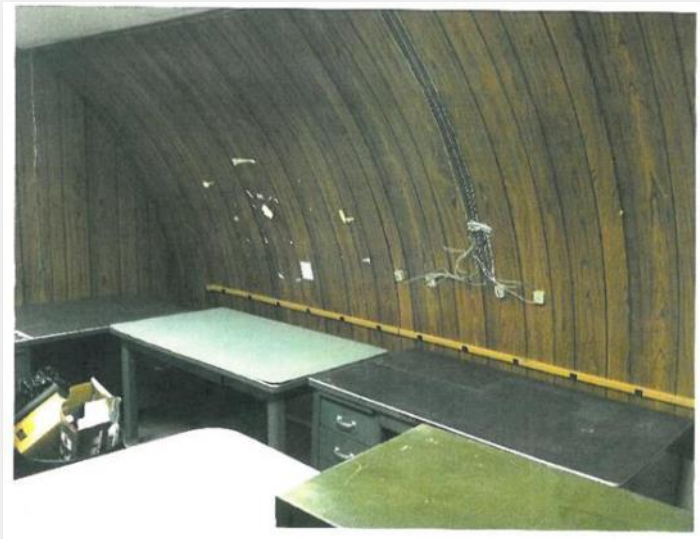


South Elevation

DEMOLITION OF UNIVERSITY BUILDING 433J

INTERIOR BUILDING PHOTOS

Attachment F



DEMOLITION OF UNIVERSITY BUILDING 433J

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors approve the demolition of building number 433J, located in Blacksburg, in accordance with the applicable statutes of the Code of Virginia (1950), as amended.

RECOMMENDATION:

That the above resolution authorizing the demolition of building number 433J be approved.

RESOLUTION FOR SMITHFIELD PLANTATION HISTORIC EASEMENT

WHEREAS, Association for the Preservation of Virginia Antiquities (“Preservation Virginia”) owns real property consisting of historic buildings and structures, which is commonly known as Smithfield Plantation and is more particularly described on the plat attached hereto; and

WHEREAS, Smithfield Plantation was listed on the Virginia Landmarks Register on November 5, 1968 and on the National Register of Historic Places on November 12, 1969; and

WHEREAS, Preservation Virginia is planning on conveying ownership and the day-to-day operation of Smithfield Plantation to the Smithfield-Preston Foundation; and

WHEREAS, The conveyance to the Smithfield-Preston Foundation is being made subject to a historic easement; and

WHEREAS, Preservation Virginia desires to convey to Virginia Tech said historic easement to ensure the preservation of the historic and architectural features for which Smithfield Plantation was listed on the Virginia Landmarks Register and the National Register of Historic Places by restricting the use of the Property as set forth in the Deed of Gift of Easement, a copy of which is attached hereto; and

WHEREAS, Virginia Tech desires to hold the historic easement and, pursuant to National Park Service qualification standards, is a qualified holder of the easement; and

WHEREAS, Virginia Tech will hold review and approval authority consistent with the terms of a typical historic easement, and will monitor the property and undertake scheduled inspections to maintain the integrity of the Smithfield Plantation; and

WHEREAS, Virginia Tech will hold this historic easement for a seven year “trial period”, at the end of which Virginia Tech will be evaluated by Preservation Virginia to determine if Virginia Tech will hold the historic easement in perpetuity;

NOW, THEREFORE, BE IT RESOLVED, that the university be authorized to execute the Deed of Gift of Easement from Preservation Virginia.

RECOMMENDATION:

That the above resolution authorizing the university to partner with the Smithfield-Preston Foundation and execute the historic easement from Preservation Virginia be approved.

March 24, 2014

SCHEDULE A

Property Description

PARCEL 1: (Parcel ID 070718 – Tax Map No 285-1 11)

ALL that certain tract or parcel of land, together with all improvements thereon containing 4.65 acres, more or less, lying and being near the town of Blacksburg, Virginia, in the Blacksburg Magisterial District of Montgomery County, Virginia, and being the farm known as "Smithfield"; and more particularly shown on plat made by E. Staley Clements, Jr., Certified Land Surveyor #611, Christiansburg, Virginia, dated December 6, 1960, revised March 10, 1961, recorded in the Clerk's Office of the Circuit Court of Montgomery County, Virginia, on December 22, 1961, in Deed Book 232, page 146, and to which plat reference is hereby made, together with free access of ingress and egress over the established roadways.

BEING the same property conveyed to Association for the Preservation of Virginia Antiquities from Janie B. Lamb and Brockenbrough Lamb, her husband, as follows: (1) A one-half (1/2) undivided interest by Deed of Gift dated December 21, 1961, recorded December 22, 1961, in the Clerk's Office, Circuit Court, Montgomery County, Virginia, in Deed Book 232, page 146; and (2) A one-half (1/2) undivided interest by Deed of Gift dated January 2, 1962, recorded January 3, 1962, in the aforesaid Clerk's Office in Deed Book 232, page 219; and (3) Deed of Gift dated January 8, 1963, recorded January 10, 1963, in the aforesaid Clerk's Office in Deed Book 239, page 320.

PARCEL 2: (Parcel ID 070971 – Tax Map No 285-2 1, 2, 3, 4 and 6)

ALL those certain lots, tracts or parcels of land, situate lying near the town of Blacksburg, Virginia, in the Blacksburg Magisterial District of Montgomery County, Virginia, and being identified as "Smithfield Plantation"; and more particularly described as follows:

Parcels 1, 2, 3, 4 and 6, all as more fully shown on plat dated November 16, 1970, made by Clements & Draper, Certified Land Surveyors, a copy of which is recorded in the Clerk's Office, Circuit Court, Montgomery County, Virginia, in Plat Book 9, page 205, to which plat reference is hereby made for a more particular description of the property hereby conveyed.

TOGETHER WITH access to the waters in Stroubles Creek and the right to use the existing and future roads for the purpose of ingress and egress and for other uses such as the installation and maintenance of utilities over, under and across said roads.

BEING the same real estate conveyed to the Association For The Preservation of Virginia antiquities from Brockenbrough Lamb, Jr., Executor of the Estate of Janie B. Lamb, deceased, by deed dated May 21, 1979, recorded September 20, 1979, in the

Clerk's Office, Circuit Court, Montgomery County, Virginia, in Deed Book 421, page 268.

PARCEL 2: (Parcel ID 0010550 – Tax Map No 285-2 5)

ALL that certain lot, tract or parcel of land, situate lying near the town of Blacksburg, Virginia, in the Blacksburg Magisterial District of Montgomery County, Virginia, and being identified as Parcel No. 5 (containing 47,410 sq. ft. – 1.088 acres) shown on plat dated November 16, 1970, made by Clements & Draper, Certified Land Surveyors, a copy of which is attached to and recorded as a part of deed dated May 21, 1979, which deed is recorded in the Clerk's Office of the Circuit Court of Montgomery County, Virginia, in Deed Book 421, page 269 – see Plat Book 9, page 205, to which plat reference is hereby made for a more particular description of the property hereby conveyed.

BEING the same real estate conveyed to the Association For The Preservation of Virginia Antiquities from Brockenbrough Lamb, Jr., Executor of the Estate of Janie B. Lamb, deceased, by Deed of Gift dated April 20, 1998, recorded May 15, 1998, in the Clerk's Office, Circuit Court, Montgomery County, Virginia, in Deed Book 1008, page 842.

NOTE TO TITLE EXAMINERS: This easement contains restrictions on permitted uses and activities on the property described below, which run with the land and are applicable to the property in perpetuity.

Prepared by and upon recording, return to:
Alexander C. Graham, Jr., Esq. (VSB No.15800)
Williams Mullen
200 S. 10th Street, Suite 1700
Richmond, Virginia 23219

Tax Map No(s): 285-1 11; 285-2 1, 2, 3, 4, 5 & 6

Note to Circuit Court Clerk: This instrument is exempt from recordation taxes under the Code of Virginia (1950), as amended, §§ 58.1-811(A)(3) and 58.1-811(D) and from Circuit Court Clerk's Fees under § 17.1-266.

DEED OF GIFT OF EASEMENT

**HISTORIC SMITHFIELD PLANTATION
TOWN OF BLACKSBURG
MONTGOMERY COUNTY, VIRGINIA
DHR SITE NUMBER: 150-5017**

THIS DEED OF GIFT OF EASEMENT ("Easement") made this ____ day of March, 2014, by **ASSOCIATION FOR THE PRESERVATION OF VIRGINIA ANTIQUITIES**, also known as **PRESERVATION VIRGINIA**, a Virginia nonprofit organization, and its successors and assigns, whose address is 204 W. Franklin Street, Richmond, Virginia, 23220, to be indexed as grantor ("Grantor" and "Preservation Virginia"), and the **VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY**, whose address is Office of University Planning, Sterrett Center, STE 48 (MC 0160), Virginia Tech, 230 Sterrett Drive, Blacksburg, Virginia 24061, to be indexed as grantee ("Grantee").

WITNESSETH:

R-1 Grantor is the owner in fee simple of real property situated in Montgomery County, Virginia, located at 1000 Smithfield Plantation Road, Blacksburg, Virginia 24060, and containing in the aggregate 12.85 acres, more or less, as further described on Exhibit A attached hereto (the "Property").

R-2 The Property contains the following historic buildings and structures (the "Historic Buildings and Structures"):

- a. An historic manor house known as "Smithfield" (the "Manor House"); and
- b. A log structure that was the miller's cabin (the "Miller's Cabin").

R-3 The Property is further comprised of the following ancillary structures (the “Ancillary Buildings and Structures”):

- a. A log structure interpreted as a weaver’s cabin;
- b. A smokehouse;
- c. A wooden structure interpreted as a cider press;
- d. A log structure blacksmith shop (under construction); and
- e. A pavilion with fireplace used for workshops, classes, meetings and social occasions.

R-4 The Property is further comprised of the ruins of former buildings and structures (the “Former Historic Buildings and Structures”), including the following:

- a. Grist mill ruins of the original grist mill;
- b. The site of the law office of William Ballard Preston (destroyed by fire in 1929).

R-5 Grantor is a 501(c)(3) organization, chartered in the Commonwealth of Virginia in 1889 dedicated to perpetuating and revitalizing Virginia’s cultural, architectural and historic heritage thereby ensuring that historic places are integral parts of the lives of present and future generations;

R-6 The main academic campus of Grantee is situated on land that once was largely part of the Smithfield Plantation, including the land and home of the historic plantation of “Solitude” (owned by Col. Robert Taylor Preston, CSA) and land from the historic plantation of “White Thorn” (owned by Col. James Francis Preston, CSA);

R-7 The Property constitutes an enclave that is completely surrounded by the main academic campus of Grantee;

R-8 Chapter 22, Title 10.1 of the Code of Virginia, as amended, entitled “Historic Resources,” was enacted to support the preservation and protection of the Commonwealth of Virginia’s significant historic, architectural, archaeological, and cultural resources, and charges the Virginia Department of Historic Resources (“VDHR”) to designate as historic landmarks to be listed in the Virginia Landmarks Register such buildings, structures, districts, and sites which it determines to have local, statewide, or national significance, and to receive properties and easements in gross or other interests in properties for the purpose of, among other things, the preservation and protection of such designated landmarks.

R-9 The Property is significant in American history and culture and is distinguished by the presence of the Manor House, an historic building known as “Smithfield” built by William Preston in 1774 as a residence;

R-10 The Preston Family cemetery, which contains the remains of William and Susanna Preston and many of their descendants and kinfolk, is located in close proximity to the Property on property that is owned by Grantee; and,

R-11 William Preston was a distinguished colonial surveyor, civil officeholder, and militia officer on the Virginia frontier;

R-12 William Preston served as a colonel in the Virginia militia during the Revolutionary War and was actively involved in planning the military affairs on the Virginia frontier;

R-13 James Patton Preston, fourth son of William Preston, served as a colonel in the War of 1812 and was wounded at the Battle of Chrysler's Field in Canada;

R-14 James Patton Preston inherited Smithfield Plantation, became one of the trustees in the act establishing Blacksburg, and later served as Governor of Virginia;

R-15 William Ballard Preston, the eldest son of James Patton Preston, inherited that portion of the Smithfield Plantation that included the Manor House, became a Whig congressman, and later Secretary of the Navy under Zachary Taylor;

R-16 William Ballard Preston was a namesake and trustee of Preston and Olin Institute in Blacksburg, which was the predecessor of Virginia Tech;

R-17 William Ballard Preston was a member of the 1861 Virginia Convention, a member of the Provisional Confederate Congress, and afterward in the Confederate Senate;

R-18 Lucinda Staples Redd Preston, inherited "Smithfield" from her husband, William Ballard Preston;

R-19 Lucinda Staples Redd Preston left "Smithfield" to her daughter, Jane Grace Preston, who married Aubin Lee Boulware, a Confederate veteran, at "Smithfield" in 1878;

R-20 Janie Preston Boulware Lamb, wife of Judge Brockenbrough Lamb, inherited "Smithfield" from her mother, Jane Grace Preston Boulware;

R-21 The Property was acquired by Grantor as gifts from Janie Preston Boulware Lamb (when she was President of the Association for the Preservation of Virginia Antiquities) and portions thereafter from her estate, of which her elder son, Brockenbrough Lamb, Jr., was the executor; as follows:

a. An undivided one-half (1/2) interest in the house and a surrounding 10-foot strip of land conveyed by Deed of Gift December 21, 1961;

b. The remaining undivided one-half (1/2) interest in the house conveyed by Deed of Gift January 1, 1962;

c. A surrounding 4.65 acres of land conveyed by Deed of Gift January 8, 1963;

d. By Deed of Bargain and Sale May 21, 1979, an additional 7.11 acres of land from the estate of Mrs. Janie Preston Boulware Lamb; and

e. A final conveyance of 1.088 acres on April 20, 1998 from the estate of Mrs. Janie Preston Boulware Lamb.

R-22 The Property was (i) individually listed on the Virginia Landmarks Register on November 5, 1968 and (ii) individually listed on the National Register of Historic Places on November 12, 1969 for its association with the lives of William and Susanna Smith Preston and its potential to provide, through interpretation and archaeological research, information essential to our insight into late 18th and early 19th century Appalachian frontier life.

R-23 Grantor and Grantee desire to ensure the preservation of the Property and the protection of the historic and architectural features for which it was listed on the Virginia Landmarks Register and the National Register of Historic Places;

R-24 Grantor and Grantee intend to further such protection by restricting the use of the Property as hereinafter set forth;

R-25 Grantee has determined that the restrictions hereinafter set forth will help preserve and protect in perpetuity the Property;

R-26 Grantee has considerable experience safeguarding other historic properties in the Commonwealth of Virginia, including Walnut Grove, Kentland Farm, and the Reynolds Homestead;

R-27 Grantee employs staff who possess historic preservation credentials;

R-28 Grantee now provides water, sewer, telephone, electricity, mowing, arborist, police, access roads, and trash services for the Property;

R-29 Grantee has determined that this Easement will limit the uses of the Property to those uses consistent with, and not adversely affecting, the significance of the Property to Southwest Virginia, to the Commonwealth of Virginia, to the Southern Appalachian region, and to the United States of America;

R-30 Grantor desires to grant and convey to Grantee, and Grantee desires to accept, a historic preservation easement (the "Easement") over the Property, first, for an Initial Term of seven (7) years from the date hereof, and then, provided that certain conditions are met, shall continue in perpetuity with Grantee as the holder. If the stated conditions are not met then another holder selected by Preservation Virginia shall be substituted and the Easement shall continue with the Substitute Holder in perpetuity, as herein set forth; and

R-31 Grantor intends to convey the property by instrument recorded immediately subsequent to this Easement, which conveyance shall be subject to the terms and conditions

hereof. References to "Preservation Virginia" herein identify certain rights and obligations reserved in gross to Preservation Virginia in contrast to the rights and obligations of the "Grantor" that run with the land in favor of successors and assigns, as further provided herein.

EASEMENT:

NOW THEREFORE, in consideration of the foregoing recitals incorporated herein and made a part hereof and in consideration of the mutual covenants, benefits, and burdens identified herein, the receipt and sufficiency of which are hereby acknowledged, Grantor does hereby GIVE, GRANT, and CONVEY to Grantee, an Easement subject to the following terms and conditions.

1. PURPOSE. It is the purpose of this Easement to help ensure that the architectural, historic, cultural and associated features of the Property will be retained and maintained forever for conservation and preservation purposes, and to help prevent any use or change to the Property that will significantly impair or interfere with the Property's conservation and preservation (the "Preservation Purpose").

The covenants, terms, conditions, and restrictions contained in this Easement are binding upon, and inure to the benefit of, the parties hereto and their successors and assigns, and shall continue as a servitude running with the Property. Grantor's rights and obligations under this Easement terminate upon proper transfer of Grantor's interest in the Property, unless reserved or restated in the instrument making such transfer. Restrictions, stipulations, and covenants contained in this instrument shall be inserted by Grantor, verbatim or by express reference, in any subsequent deed or other legal instrument by which Grantor divests itself of fee simple title or any lesser estate in the Property or any part thereof, including, by way of example and not limitation, a lease of office space.

Even if the Property consists of more than one parcel for real estate tax or any other purpose, it shall be considered one parcel for the purpose of this Easement, and the restrictions and covenants of this Easement shall apply to the Property as a whole and shall bind all successors in interest of such Property in perpetuity.

The restrictions hereby imposed on the use of the Property by this Easement are in accord with the policy of the Commonwealth of Virginia, as set forth in Chapters 22 and 17 of Title 10.1 of the Code of Virginia of 1950, as amended, to preserve the Commonwealth's designated historic landmarks, and to preserve historic and scenic open-space lands in the Commonwealth. The acts which Grantor covenants to do and not to do upon the Property, and the restrictions which Grantee is hereby entitled to enforce, shall be as described in this Easement. Notwithstanding any other provisions of this Easement, all permitted uses of the Property shall be undertaken in a manner that is consistent with the Preservation Purpose. The parties hereby agree as follows:

2. TERM. Notwithstanding any provision of this Easement to the contrary, the foregoing gift, grant and conveyance is made for an initial period of seven (7) years commencing as of the Effective Date of this Easement (the "Initial Term").

a. Following the Initial Term, Grantee will hold this Easement in perpetuity provided that the conditions set forth below are met:

i. Within twelve (12) months prior to the termination of the Initial Term, an authorized agent of Grantee has indicated officially in writing Grantee's willingness and intent to hold the Easement hereby granted in perpetuity, notice of which shall be provided to Grantor.

ii. During the Initial Term, Grantee satisfied its obligations set forth in Paragraph 5.

iii. During the Initial Term, Grantee conducted required inspections in accordance with Paragraph 12.

iv. Evidence of satisfaction of the foregoing Paragraphs 2(a)(i), (ii), and (iii) executed by Preservation Virginia and Grantee, has been recorded in the Clerk's Office of the Circuit Court of Montgomery County, Virginia, which shall be at Grantor's sole cost and expense.

b. Provided that any condition set forth in Paragraph 2(a) hereof has not been timely met, Grantee agrees to assign all of its right, title and interest given, granted and conveyed from Grantor to Grantee hereunder to the Substitute Holder, as defined herein. The Substitute Holder shall be an eligible holder of a historic preservation easement deemed satisfactory to Preservation Virginia, in its sole discretion, after notice to and consultation with the successor Grantor, if any, as more particularly identified by Assignment and Amendment to Easement (the "Assignment") executed by Preservation Virginia, Grantee and the Substitute Holder. By the Assignment, the Substitute Holder shall agree to hold this Easement in perpetuity and thereby ratify the provisions hereof, which shall be recorded in the Clerk's Office of the Circuit Court of Montgomery County, Virginia. Following the recordation of the Assignment, the foregoing conditional assignment by Grantee shall be effective immediately upon the expiration of the Initial Term, following which Grantee shall be released from any obligation to Preservation Virginia and any successor Grantor arising after the date of such Assignment.

c. If at any point during the Initial Term, Grantee fails to satisfy its obligations set forth in Paragraph 5 or conduct required inspections in accordance with Paragraph 12 (each, a "Grantee Default"), and any Grantee Default remains uncured thirty (30) days following notice thereof by Preservation Virginia, then upon demand by Preservation Virginia Grantee shall convey all of its right, title and obligation as holder of this Easement to a Substitute Holder pursuant to Paragraph 2(b) hereof.

d. In the event that the Grantee shall at any time in the future be unable to hold the Easement or should Grantee choose to assign this Easement, Grantee shall convey all of its right, title and obligation as holder of this Easement to a Substitute Holder pursuant to Paragraph 2(b) hereof.

3. DOCUMENTED CONDITION. The parties agree that the baseline documentation report (the "Baseline"), will contain, among other things, photographs of the Property taken by Preservation Virginia on ____[insert date]____, accurately documents the

appearance and condition of the Property as of the date of recordation of this Easement (the “Effective Date”). The Baseline shall be stored permanently in the Special Collections, Virginia Tech Library and in the files of Preservation Virginia. Hereafter, the Property shall be maintained, preserved, and protected in this documented state as nearly as practicable, except for changes that are expressly permitted hereunder. Preservation Virginia warrants that it has made the Baseline available to Grantee prior to the Effective Date. The Baseline may be used to determine compliance with and enforcement of the terms of this Easement; however, the parties are not precluded from using other relevant evidence or information to assist in that determination.

4. GRANTOR’S COVENANTS. In furtherance of the easement herein granted, Grantor undertakes, of itself, to do (or refrain from doing as the case may be) upon the Property each of the following covenants, which contribute to the public purpose of significantly protecting and preserving the Property:

a. Permitted Buildings and Structures. No building, structure, or amenity shall be built or maintained on the Property other than:

- i. The Historic Buildings and Structures;
- ii. The Ancillary Buildings and Structures;
- iii. Buildings and structures that are used only to support the interpretation at Smithfield Plantation, to provide venues for workshops, classes and interpretation of the period, and are a distinctly different architectural style such as an Interpretative Center or Pavilion;
- iv. Buildings and structures that are used to interpret life on the Southwest Virginia frontier in the latter part of the 18th century through the late 19th century and are of the same architectural style as structures at the Smithfield Plantation of that time period, such as a blacksmith shop or summer kitchen; and
- v. Reconstructions of the Former Historic Buildings and Structures, or any other historic outbuildings or structures which are documented through professional historical or archaeological investigation to have been located on the Property, which shall be done in a manner consistent with the *Secretary’s Standards* as set forth in Section 6 hereof.

b. Grantor’s Maintenance Obligation.

i. Grantor’s Obligation to Maintain. Grantor agrees at all times to maintain the Historic Buildings and Structures in the same or better condition and state of repair as that existing on the Effective Date and according to any changes or modifications that have been approved in writing by Grantee after the Effective Date. Grantor’s obligation to maintain shall require replacement, repair, construction and/or reconstruction by Grantor whenever necessary to preserve the Historic Buildings and Structures in substantially the same condition and state of repair as that existing on the Effective Date and according to any changes or modifications that have been approved in writing by Grantee after the Effective Date. Without express written permission of Grantee, Grantor shall not adversely affect the structural soundness of any Historic Building and Structure. During the Initial Term, Grantee may, at its discretion, consult with

Preservation Virginia as to any matter concerning the maintenance and/or preservation of any Historic Building and Structure, subject to the prior notice and approval rights of Preservation Virginia concerning structural modifications as set forth in Paragraph 2(b)(vi) below.

ii. Casualty Damage and Destruction. Notwithstanding the foregoing, in the event that any building or structure identified in (a) of this Paragraph 4 is destroyed or damaged by causes beyond Grantor's or Grantee's reasonable control including fire, flood, storm, earth movement, or other acts of God, to such an extent that in the reasonable opinion of Grantor and Grantee, in consultation with the Town Building Official applying the Virginia Rehabilitation Code, it is determined that the building or structure cannot be rehabilitated, nothing herein shall obligate Grantor or Grantee to reconstruct the building or structure or return it to its condition as documented in the Baseline. Furthermore, in the event that any building or structure identified in this Paragraph 4 is destroyed or damaged by causes beyond Grantor's or Grantee's reasonable control including fire, flood, storm, earth movement, or other acts of God, to such an extent that the building or structure would no longer qualify for listing on the Virginia Landmarks Register or the National Register of Historic Places, nothing herein shall obligate Grantor or Grantee to reconstruct the building or return it to its condition as documented in the Baseline.

In the event that Grantor does not possess sufficient resources as are reasonably necessary to fund the non-structural maintenance of any of the Historic Buildings and Structures required by this Paragraph 4, then Grantor may postpone such non-structural maintenance for a period of time as is reasonable in order to obtain the resources to complete the same; provided, however, that during such period Grantor shall diligently undertake commercially reasonable efforts to obtain the necessary resources. In the event that Grantor does not possess sufficient resources as are reasonably necessary to fund any structural maintenance of any of the Historic Buildings and Structures required by this Paragraph 4, including any replacement, construction or reconstruction, then Grantor shall immediately notify Grantee, which may conduct such maintenance on behalf of Grantor at Grantor's expense, which shall accrue interest at the prime rate plus (2%) per annum (or such lesser percentage as may be the maximum amount permitted by law) from the date invoiced until paid in full, to the Grantee.

iii. Like Workmanship Required. For the purposes of this Paragraph 4, the obligation to maintain and repair shall mean the use by Grantor of like materials applied with workmanship comparable to that which was used in the construction or application of those materials being repaired or maintained, for the purpose of retaining in good condition the appearance and construction of the historic building. In fulfilling its maintenance obligation under (b) of this Paragraph 4, Grantor shall not make changes in appearance, materials, and workmanship from that existing on the Effective Date or as thereafter approved as required without the prior written approval of Grantee.

iv. Grantor's Maintenance of Character-Defining Elements. The historic character-defining original or historic interior architectural elements of the Historic Buildings and Structures, including windows, window frames, doors, door frames, stairs, staircases, ceilings, floorboards, chair rails, baseboards, trim and hardware existing on the Effective Date or as thereafter approved as required, shall not be altered or removed from the building within which it exists on the Effective Date without the prior written approval of Grantee.

v. Grantor's Use and Enjoyment of Property. Subject to the restrictions of Subparagraphs (b)(i), (ii), (iii), and (iv) of this Paragraph 4, Grantor reserves the right to continue all manner of use and enjoyment of the Property consistent with the terms of this Easement, including, but not limited to, the right to the maintenance and repair of existing fences; the right to maintain existing driveways, roads, and paths with the use of same or similar surface materials; the right to cut, remove, and clear grass, trees, or other vegetation and to perform routine maintenance, landscaping, horticultural activities, and upkeep, consistent with the Preservation Purpose of this Easement.

vi. Grantee's Review. Subject to Paragraph 4(b)(v), Grantee shall have ultimate responsibility for review and approval of any changes or modifications to the Property involving maintenance and/or preservation of any Historic Building and Structure and surrounding grounds. During the Initial Term, Grantee's review and approval of any such change or modification to any Historic Building and Structure shall in all events follow prior notice by the successor Grantor to, and approval by, Preservation Virginia. During the Initial Term, Grantee may, but is not required to consult with Preservation Virginia. Following the Initial Term, Grantee or Substitute Holder, as the case may be, shall have exclusive responsibility for review and approval of all maintenance and any proposed change or modification to the Property. Grantee or Substitute Holder may, at its discretion, consult with Preservation Virginia as to any matter concerning the maintenance and/or preservation of any Historic Building and Structure.

c. Archeology. Any ground disturbing activity or earth removal, including any activity that has been pre-approved by Grantee as required hereunder, shall require that an archaeological survey or investigation be conducted by a competent archaeologist as part of such activity. Archaeological survey or investigation may be undertaken on the Property prior to the conclusion of the Initial Term only if a scope of work for such survey or investigation is reviewed and approved in writing in advance by Preservation Virginia and only if said survey or investigation is performed in accordance with the Secretary of the Interior's Standards for Archeology and Historic Preservation and under the supervision of a professionally qualified archaeologist. Any survey or investigation shall be designed to protect, preserve, document or recover archaeologically significant deposits, sites, or features in the area of the proposed ground disturbing activity. Artifacts and objects of antiquity recovered from the Property shall remain in the possession of Grantor. Grantor may choose to donate any or all artifacts and objects of antiquity to Grantee, Preservation Virginia, or to another educational or museum organization. Artifacts and objects of antiquity professionally excavated from archaeological deposits, sites, or features on the Property shall be treated, curated, and preserved according to the Secretary of the Interior's Standards for Archeology and Historic Preservation standards, or similar document that may be substituted with the approval of Preservation Virginia, as applicable. Grantor shall take all reasonable precautions to protect archaeological deposits, sites, or features on the Property from looting, vandalism, erosion, mutilation, or destruction from any cause. Grantor shall notify Preservation Virginia as soon as practicable but within thirty (30) calendar days following discovery or knowledge of any looting, vandalism, erosion, mutilation, or destruction of archaeological deposits, sites, or features on the Property. For the purposes of this subparagraph, any rights of prior notice to and approval by Preservation Virginia shall, upon the satisfaction of conditions of the Initial Term set forth in Paragraph 2(a), immediately transfer to Grantee.

5. GRANTEE'S COVENANTS. The Grantee hereby warrants and covenants that:

- a. Grantee shall exercise reasonable judgment and care in performing its obligations and exercising its rights under the terms of the Easement.
- b. Grantee possesses the requisite staff and resources and experience to interpret the Secretary's Standards (as hereinafter defined) satisfactorily and otherwise meet the obligations imposed by this Easement.
- c. Grantee desires to engage Preservation Virginia in the process of reviewing and approving changes or modifications that affect the maintenance and/or preservation of the Property.

6. STANDARD FOR REVIEW. In exercising any authority conferred on Grantee by this Easement to inspect the Property or to review and approve any construction, reconstruction, alteration, repair or maintenance activity, Grantee shall apply the following (collectively the "Secretary's Standards"):

- a. *Secretary of the Interior's Standards for Archeology and Historic Preservation* (National Park Service, as amended);
- b. *Secretary of the Interior's Standards for Rehabilitation* (36 C.F.R. 67);
- c. *Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 C.F.R. 68);
- d. *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*; and
- e. *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.*

During the Initial Term, Grantor agrees, upon request of Grantee, to consult in connection with any action proposed to be undertaken that requires application of the Secretary's Standards pursuant to this Paragraph 6.

7. TRASH. Accumulation or dumping of trash, refuse, junk or toxic materials is not permitted on the Property.

8. ACTIVITIES ON THE PROPERTY. The following commercial operations, activities, and uses are permitted on the Property:

- a. Commercial Activity:
 - i. Use and interpretation of the Property as a historic site; and
 - ii. Activities Within Permitted Buildings and Structures. Grantor

reserves the right to undertake commercial activities conducted within buildings and structures reserved in Paragraph 4, provided that any alteration to the exterior or historic interior features of the Historic Buildings and Structures shall not impact the Preservation Purpose and such alterations are consistent with the Secretary's Standards and Paragraph 4(b). Grantor shall not cause or permit upon the Property any activity that would produce (i) pedestrian or vehicular traffic to and from the Property that imposes a material adverse impact on any buildings, structures or the grounds, or (ii) any violation or failure to comply with any applicable state or local law, ordinance or regulation; and

iii. Outdoor Events. Grantor reserves the right to undertake temporary or seasonal outdoor activities or events (each, an "Activity"), that do not permanently alter the physical appearance of the Property and are consistent with the Preservation Purpose.

b. Grantor reserves the right to undertake any other Activity on the Property not expressly prohibited herein, provided such Activity does not conflict with the Preservation Purpose of this Easement.

Notwithstanding the above, no industrial use of the Property or activities on the Property is permitted.

9. UTILITY LINES; ROADWAYS. Electric, water, sewer, telephone and gas transmission lines on the Property that are to serve the Property shall be underground or visually hidden. Grantee will undertake reasonably diligent efforts to ensure that no overhead transmission/utility lines are located on the Property by Grantee, any municipal entity or public utility provider. Grantee agrees to use reasonably diligent efforts to challenge any condemnation or taking of any portion of the Property, or the location of any public right-of-way on the Property, except to the extent the principal purpose of such right-of-way is to provide access to Smithfield. Nothing in this paragraph shall be construed as imposing any obligation or cost requiring expenditures by Grantee beyond those which are reasonably customary in the normal course of conducting business as a higher education institution.

10. SIGNS. Grantor reserves the right to locate, construct, and maintain signs on the Property, each sign not to individually exceed nine (9) square feet in size each for any or all of the following purposes: (i) to state the name and address of the Property or Property owners, (ii) to provide information necessary for the normal conduct of any permitted business or activity on the Property, (iii) to advertise the Property for sale or rent, (iv) to note the historical recognition of the site, and (v) to provide notice necessary for the protection of the Property and for giving directions to visitors.

11. PUBLIC ACCESS. The parties hereby acknowledge that the Property is visible from public rights-of-way, and that members of the general public may view the Property from said rights-of-way. Grantee may take photographs, drawings, or other representations documenting the significant historical, cultural, and architectural character and features of the Property and may use or publish them (or authorize others to do so) to fulfill its charitable or educational purposes.

Although this Easement will benefit the public as described above, nothing herein shall be construed to convey to the public a right of access to, or use of, the Property. Grantor retains the exclusive right to determine such access and use, subject to the terms hereof.

12. RIGHT OF INSPECTION.

a. Grantor hereby agrees that representatives of Grantee shall be permitted at all reasonable times to inspect the exterior grounds of the Property.

b. Grantor and Grantee agree that representatives of Grantee are authorized to enter and inspect the interior of buildings to ensure maintenance of structural soundness and safety upon reasonable notice and at reasonable times. Grantee is required to conduct inspections at least once per year. The required inspection shall include both the interior and exterior of the Property and shall be conducted in accordance with Policy No. 3 of the Department of Historic Resources Easement Program. Grantee shall issue reports of required inspections to Preservation Virginia with copies to the successor Grantor within seven (7) days of completing the inspection (an "Inspection Report").

c. Upon discovering a change to the physical condition of the property requiring preservation, restoration, repair or replacement, Grantee shall provide Preservation Virginia written notice of such change (a "Preservation Notice") within forty-eight (48) hours of discovery. Notice to the Grantor shall be mailed to the address as set forth herein.

13. ENFORCEMENT. Grantee has the following legal remedies to correct any violation of any covenant, stipulation, or restriction herein, in addition to any remedies now or hereinafter provided by law:

a. Grantee has the right to bring an action at law or in equity in any court of competent jurisdiction to enforce the restrictions and covenants contained herein. The foregoing specifically includes the right to require restoration of the Property to a condition of compliance with the terms of this Easement as existed on the date of this Easement except to the extent such condition thereafter changed in a manner consistent with the restrictions. Representatives of the Grantee may, following reasonable notice to Grantor, enter upon the Property, correct any such violation, and hold Grantor, its successors, and assigns, responsible for the cost thereof.

i. Such cost shall constitute a lien on the Property until paid by the Grantor.

ii. Grantee shall exercise reasonable care in selecting independent contractors if it chooses to retain such contractors to correct any such violations.

b. Grantee may, following reasonable written notice to Grantor, institute suit(s) to enjoin such violation by *ex parte*, temporary, preliminary, or permanent injunction, including prohibitory and/or mandatory injunctive relief, and to require restoration of the Property to the condition and appearance required under this instrument.

c. If a court determines that Grantor failed to comply with this Easement, Grantor shall reimburse Grantee for all out-of-pocket costs and expenses incurred in connection

therewith, including all reasonable court costs, attorney's, architectural, engineering, and expert witness fees, in addition to any other payments ordered by the court for its costs and expenses. Grantor shall not be liable to Grantee for any punitive, exemplary or consequential damages, except as enumerated in the first sentence of this Paragraph 13(c).

d. Subject to Subparagraph 16(b) below, Grantee does not waive or forfeit the right to take action as may be necessary to ensure compliance with this Easement by any delay or prior failure to act and Grantor hereby waives any defenses of waiver, estoppel or laches with respect to any failure to act by Grantee.

e. Any challenge to the validity or enforceability of this Easement must be brought in a court of competent jurisdiction within the Commonwealth of Virginia. No such challenge or action may originate in, be transferred or removed to any court outside of the Commonwealth of Virginia except for federal courts of appeal.

f. Nothing in this Easement shall create any right in the public or any third party to maintain any judicial proceeding against Grantor or Grantee or to enforce this Easement through any means including, but not limited to, judicial action.

g. Notwithstanding anything herein to the contrary, no provision of this Easement shall be interpreted to confer upon Grantee any power of sale with respect to the Property, or any right to take legal or equitable title to, or ownership or possession of, the Property, whether by foreclosure or otherwise, other than the enforcement of a lien against the Property for amounts due and payable by Grantor to Grantee.

14. INDEMNIFICATION. Grantor hereby agrees to pay, protect, indemnify, hold harmless, and defend at its own cost and expense, the Grantee, its agents, directors, employees, along with the Commonwealth of Virginia, from and against any and all claims, liabilities, expenses, costs, damages, losses, expenditures (including reasonable attorney's fees and disbursements hereafter incurred) arising out of or in connection with injury to or death of any person; physical damage to the Property; the presence or release in, on, or about the Property, at any time, of any substance now or hereafter defined, listed, or otherwise classified pursuant to any law, ordinance, or regulation as hazardous, toxic, polluting, or contaminating substance; or other injury or other damage occurring on or about the Property, unless such injury or damage is caused by Grantee or its agents, directors, employees, officers, employees, or independent contractors. Grantor further agrees to pay, protect, indemnify, hold harmless, and defend at its own cost and expense, the Grantee, its agents, directors, employees, along with the Commonwealth of Virginia, from and against any and all claims, liabilities, expenses, costs, damages, losses, expenditures (including reasonable attorney's fees and disbursements hereafter incurred) arising out of or related to the administration, performed in good faith, of this preservation and conservation easement, including, but not limited to, the granting or denial of consents hereunder, the reporting on or advising as to any condition of the Property, and the execution of work on the Property. In the event Grantor is required to indemnify Grantee, the amount of such indemnification, until paid, shall constitute a lien on the Property.

15. INSURANCE. Grantor shall keep the Historic Buildings and Structures and Ancillary Buildings and Structures insured by an insurance company licensed to issue policies in

the Commonwealth of Virginia and rated "Secure" by A.M. Best Company or other qualified insurance rating company for the full replacement value against loss from the perils commonly insured under standard fire and extended coverage policies and comprehensive general liability insurance against claims for personal injury, death, and property damage of a type and in such amounts as would, in the opinion of the Grantee, normally be carried on a property such as the Property protected by a preservation and conservation easement. Such insurance shall include Grantee's interest and name Grantee, and the Commonwealth of Virginia, as additional insureds and provide for at least 30 days' notice to Grantee before cancellation and that the act or omission of one insured will not invalidate the policy as to the other insured party. Grantor shall deliver to Grantee fully executed copies of such policies evidencing the insurance coverage at the commencement of this grant and copies of new or renewed policies at least 10 days prior to the expiration of such policy. Grantee shall have the right to provide insurance at Grantor's cost and expense, should Grantor fail to obtain the same. If Grantee obtains such insurance, the cost shall be a lien on the Property until paid to Grantee by Grantor.

16. NOTICE AND APPROVALS.

a. Form of Notice: Any notices, demands or other communications required or permitted to be given by the terms of this Easement shall be given in writing and shall be delivered (i) in person (such delivery to be evidenced by a signed receipt); (ii) by certified mail, postage prepaid, return receipt requested; (iii) by U.S. Express Mail or commercial overnight courier; (iv) by regular U.S. Mail; (v) by telephone facsimile; or (vi) by electronic mail. Such notices shall be deemed to have been "given" (i) when actually delivered, in the case of personal delivery; (ii) when delivered as confirmed by an official return receipt if sent by certified mail; (iii) within two (2) business days of deposit with a courier in the case of U.S. Express Mail, or commercial overnight courier; (iv) seven (7) business days after the postmarked date thereon, in the case of U.S. Mail; (v) when sent, with a confirmation of delivery if sent by telephone facsimile; or (vi) when received, if sent by electronic mail. Such notices shall be sent to the addresses of Grantor set forth in Paragraph 12 of this Easement, or such other address as Grantor may, pursuant to the notice provisions of this Paragraph, direct, or to the facsimile telephone number or electronic mail address of Grantor as provided.

Grantor, its successors or assigns shall provide written notice of a change of address in advance of such change. Notice of change of address shall be effective only when done in accordance with this Paragraph.

b. Request for Grantee Approval: Whenever a written request for Grantee's approval is submitted pursuant hereto, Grantee shall not unreasonably withhold such approval. If Grantee fails to respond in writing within sixty (60) business days of receipt of such request, then Grantee shall be deemed to have approved the request, and Grantor may proceed with the action for which approval was requested. Nothing herein shall be construed, however, to require Grantee to issue a final decision on such request within such sixty (60)-day period, provided that such final decisions are issued within the earlier of (i) one year of Grantee's receipt of such request or (ii) in as timely a fashion as is practicable under the circumstances. Such circumstances shall include the complexity of the request or proposed project, the amount of information submitted with the initial request, and the need for on-site inspections or consultations. In the event that Grantor does not implement any approval granted for a period of

one (1) year, such approval shall be void. Grantor may resubmit the request for approval; however, such approval may be given or denied in the sole discretion of Grantee, which Grantee shall not unreasonably withhold.

17. TRANSFER OF TITLE. Prior to any *inter vivos* transfer of title to the Property, excluding deeds of trust given for the purpose of securing loans, Grantor shall notify Grantee in writing. This Easement shall be referenced by deed book and page number, instrument number, or other appropriate reference in any deed conveying an interest in the Property.

18. GRANTEE'S PROPERTY RIGHT. Grantor agrees that the donation of this Easement gives rise to a property right, immediately vested in Grantee. Following the satisfaction of all of the conditions set forth in Section 2(a), Grantee may, after prior notice to and consultation with Grantor, convey, assign, or transfer this easement to a unit of federal, state, local government whose purposes are to promote preservation or conservation of historical, cultural, or architectural resources, and which at the time of the conveyance, assignment, or transfer is a qualified organization under Section 170(h)(3) of the Internal Revenue Code. Any such conveyance, assignment, or transfer shall require that the Preservation Purpose for which this easement was granted will continue to be carried out.

19. CONVERSION OR DIVERSION. Grantor and Grantee intend that this Easement shall be perpetual and not be extinguished or challenged by either party in any way. The Grantor and Grantee acknowledge that no part of the Property may be converted or diverted from the Preservation Purpose.

20. EXTINGUISHMENT. Notwithstanding the provisions of Section 10.1-1704 *et seq* of the Virginia Open-Space Land Act, Grantor and Grantee hereby recognize that an unexpected change in the conditions surrounding the Property may make it impossible to continue ownership or use of the Property for preservation and conversation purposes and necessitate extinguishment of this easement.

Should an attempt be made to extinguish this Easement, such extinguishment can be carried out only by judicial proceedings and only if in compliance with Section 10.1-1704 *et seq* and I.R.C. Section 170(h) and applicable Treasury Regulations.

21. CONSTRUCTION. This Easement shall be construed according to the laws of the Commonwealth of Virginia and the United States of America. Nevertheless, any general rule of construction notwithstanding, the parties agree that this Easement shall be liberally construed in favor of the conveyance to Grantee to affect the conservation and preservation purpose as described in Paragraph 1 above.

If any provision of this Easement is found to be ambiguous, an interpretation consistent with advancing the Preservation Purpose and with qualification under I.R.C. Section 170(h) as aforesaid shall be favored over any other interpretation.

22. AMENDMENT. Grantee and Grantor may amend this Easement to enhance the Property's Preservation and Conservation Values or add to the restricted property, provided that no amendment shall (i) conflict with or be contrary to or inconsistent with the Preservation Purpose of this Easement, (ii) reduce the protection of the Preservation and Conservation Values,

(iii) affect any rights reserved and retained by Grantor, or obligations imposed by Grantor on any successor or assign, or (iv) affect the status of Grantee as a “qualified organization”. No amendment shall be effective unless documented in a notarized writing executed by Grantee and Grantor, their successors or assigns, and recorded among the land records of Montgomery County, Virginia.

23. SEVERABILITY. The invalidity or unenforceability of any provision of this Easement shall not affect the validity or enforceability of any other provision of this Easement or any ancillary or supplementary agreement relating to the subject matter hereof.

24. COUNTERPARTS. This Easement may be executed in one or more counterpart copies, each of which, when executed and delivered shall be an original, but all of which shall constitute one and the same Easement. Execution of this Easement at different times and in different places by the parties hereto shall not affect the validity of the Easement.

25. DEFINITIONS. In this Deed of Easement the term “Grantor” shall include Grantor and its successors and assigns, and the term “Grantee” shall include Grantee and its successors and assigns.

26. RESERVATIONS. Preservation Virginia has reserved and retained certain rights respecting the Property, which ordinarily would be conferred on Grantee, but were not, and such rights and any obligations with respect thereto will be set forth as covenants in a deed to its successor or assign.

Witness the following signatures and seals:

[COUNTERPART SIGNATURE PAGES TO FOLLOW]

[COUNTERPART SIGNATURE PAGE 1 OF 2]

GRANTOR:

ASSOCIATION FOR PRESERVATION OF VIRGINIA ANTIQUITIES,
a/k/a PRESERVATION VIRGINIA, a Virginia nonprofit corporation

By: _____ (SEAL)
Elizabeth Kostelny, Executive Director

COMMONWEALTH of VIRGINIA)
CITY of RICHMOND), to-wit:

The foregoing instrument was acknowledged before me this ____ day of _____, 2014, by Elizabeth Kostelny, Executive Director, on behalf of Association for Preservation of Virginia Antiquities, Grantor therein.

Notary Public

My commission expires: _____

Certification Number: _____

[COUNTERPART SIGNATURE PAGE 2 OF 2]

Accepted:

GRANTEE:

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY,
a political subdivision of the Commonwealth of Virginia

By: _____
Name: Sherwood G. Wilson
Its: Vice President for Administration

Date: _____

COMMONWEALTH of VIRGINIA)
COUNTY of MONTGOMERY), to-wit:

The foregoing instrument was acknowledged before me this ____ day of _____, 2014, by Sherwood G. Wilson, Vice President for Administration, on behalf of Virginia Polytechnic Institute and State University.

Notary Public

My commission expires: _____

Notary Registration No. _____ (SEAL)

APPROVED FOR LEGAL FORM AND SUFFICIENCY:

Special Assistant Attorney General

SCHEDULE A

Property Description

PARCEL 1: (Parcel ID 070718 – Tax Map No 285-1 11)

ALL that certain tract or parcel of land, together with all improvements thereon containing 4.65 acres, more or less, lying and being near the town of Blacksburg, Virginia, in the Blacksburg Magisterial District of Montgomery County, Virginia, and being the farm known as “Smithfield”; and more particularly shown on plat made by E. Staley Clements, Jr., Certified Land Surveyor #611, Christiansburg, Virginia, dated December 6, 1960, revised March 10, 1961, recorded in the Clerk’s Office of the Circuit Court of Montgomery County, Virginia, on December 22, 1961, in Deed Book 232, page 146, and to which plat reference is hereby made, together with free access of ingress and egress over the established roadways.

BEING the same property conveyed to Association for the Preservation of Virginia Antiquities from Janie B. Lamb and Brockenbrough Lamb, her husband, as follows: (1) A one-half (1/2) undivided interest by Deed of Gift dated December 21, 1961, recorded December 22, 1961, in the Clerk’s Office, Circuit Court, Montgomery County, Virginia, in Deed Book 232, page 146; and (2) A one-half (1/2) undivided interest by Deed of Gift dated January 2, 1962, recorded January 3, 1962, in the aforesaid Clerk’s Office in Deed Book 232, page 219; and (3) Deed of Gift dated January 8, 1963, recorded January 10, 1963, in the aforesaid Clerk’s Office in Deed Book 239, page 320.

PARCEL 2: (Parcel ID 070971 – Tax Map No 285-2 1, 2, 3, 4 and 6)

ALL those certain lots, tracts or parcels of land, situate lying near the town of Blacksburg, Virginia, in the Blacksburg Magisterial District of Montgomery County, Virginia, and being identified as “Smithfield Plantation”; and more particularly described as follows:

Parcels 1, 2, 3, 4 and 6, all as more fully shown on plat dated November 16, 1970, made by Clements & Draper, Certified Land Surveyors, a copy of which is recorded in the Clerk’s Office, Circuit Court, Montgomery County, Virginia, in Plat Book 9, page 205, to which plat reference is hereby made for a more particular description of the property hereby conveyed.

TOGETHER WITH access to the waters in Stroubles Creek and the right to use the existing and future roads for the purpose of ingress and egress and for other uses such as the installation and maintenance of utilities over, under and across said roads.

BEING the same real estate conveyed to the Association For The Preservation of Virginia antiquities from Brockenbrough Lamb, Jr., Executor of the Estate of Janie B. Lamb, deceased, by deed dated May 21, 1979, recorded September 20, 1979, in the Clerk’s Office, Circuit Court, Montgomery County, Virginia, in Deed Book 421, page 268.

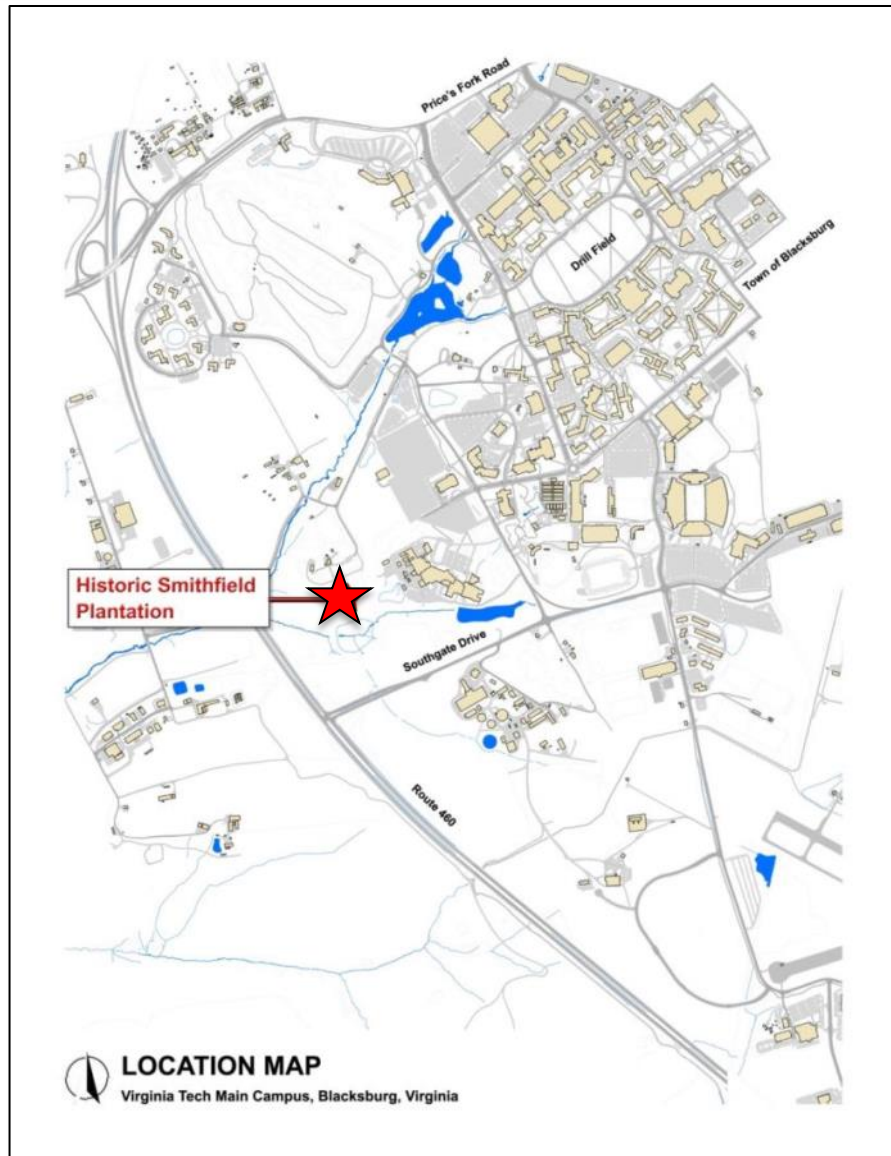
PARCEL 2: (Parcel ID 0010550 – Tax Map No 285-2 5)

ALL that certain lot, tract or parcel of land, situate lying near the town of Blacksburg, Virginia, in the Blacksburg Magisterial District of Montgomery County, Virginia, and being identified as Parcel No. 5 (containing 47,410 sq. ft. – 1.088 acres) shown on plat dated November 16, 1970, made by Clements & Draper, Certified Land Surveyors, a copy of which is attached to and recorded as a part of deed dated May 21, 1979, which deed is recorded in the Clerk's Office of the Circuit Court of Montgomery County, Virginia, in Deed Book 421, page 269 – see Plat Book 9, page 205, to which plat reference is hereby made for a more particular description of the property hereby conveyed.

BEING the same real estate conveyed to the Association For The Preservation of Virginia Antiquities from Brockenbrough Lamb, Jr., Executor of the Estate of Janie B. Lamb, deceased, by Deed of Gift dated April 20, 1998, recorded May 15, 1998, in the Clerk's Office, Circuit Court, Montgomery County, Virginia, in Deed Book 1008, page 842.

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Proposed Historic Easement for:
SMITHFIELD PLANTATION



Ownership

- **Smithfield Plantation** is currently **owned by Preservation Virginia**
- Preservation Virginia intends to **convey ownership of Smithfield Plantation to the Smithfield-Preston Foundation**
- Preservation Virginia intends to **convey ownership of an Historic Easement to Virginia Tech**



Responsibilities

- **Smithfield-Preston Foundation** (*new property owner*) will be **responsible for maintenance & renovation costs**
- **For a 7 year term, Virginia Tech to provide oversight** of Historic Easement **to ensure maintenance, renovations, and additions comply with the** Virginia Department of Historic Resources (DHR) Preservation Easement Program
- **Upon the expiration** of the 7 year term, should Preservation Virginia and Virginia Tech be in agreement, then **oversight** of the Historic Easement **will be provided by Virginia Tech in perpetuity.**

Implementation

- VT Office of University Planning (OUP) to **document the baseline conditions** at the time of the easement transfer
- OUP to **provide annual inspections** consistent with Virginia Department of Historic Resources (DHR) Preservation Easement Program to be referenced against the baseline conditions
- OUP to **provide review of applications for work** on the easement property



NOW, THEREFORE, BE IT RESOLVED, that the university be authorized to execute the Deed of Gift of Easement from Preservation Virginia.

RECOMMENDATION:

That the above resolution authorizing the university to partner with the Smithfield-Preston Foundation and execute the historic easement from Preservation Virginia be approved.

Committee Minutes

FINANCE AND AUDIT COMMITTEE

Duck Pond Room, The Inn at Virginia Tech

March 24, 2014

Finance Closed Session

Board Members Present: Mr. Jim Chapman, Mr. B.K. Fulton, Ms. Deborah Petrine, Mr. Michael Quillen

VPI & SU Staff: Ms. Kay Heidbreder, Ms. Sharon Kurek, Dr. Tim Sands, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Dr. Charles W. Steger, Dr. Bob Walters

1. Motion for Closed Session
- * 2. Ratification of Personnel Changes Report: The Committee met in Closed Session to review and take action on the quarterly personnel changes report.

The Committee recommended the personnel changes report to the full Board for approval.

3. Report on Virginia Tech Applied Research Corporation: At the November, 2013 meeting, the Committee approved a \$2 million loan, as a line of credit, to be made available to VT-ARC to support its ongoing operations as it transitions from start-up status. The Committee requested management to provide an update regarding the operational performance of VT-ARC. In response to the request, the Committee received information on the VT Applied Research Corporation's operational activities and market environment. The information was presented in Closed session due to discussion of personnel related matters.

Finance Open Session

Board Members Present: Mr. Jim Chapman, Mr. B. K. Fulton, Ms. Deborah Petrine

VPI & SU Staff: Mr. Bob Broyden, Mr. Al Cooper, Mr. John Cusimano, Mr. Brian Daniels, Dr. John Dooley, Ms. Annabelle Fuselier, Ms. Natalie Hart, Mr. Tim Hodge, Ms. Elizabeth Hooper, Ms. Sharon Kurek, Mr. Mark Owczarski, Ms. Kim Linkous, Mr. Ken Miller, Ms. Terri Mitchell, Ms. Laura Neff-Henderson, Ms. Lisa Royal, Mr. John Rudd,

Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Mr. Jeb Stewart, Mr. Brad Sumpter, Dr. Bob Walters, Mr. Chris Yianilos

Guests: Ms. Gargi Singh

1. Motion to Reconvene in Open Session: Motion to begin open session.
2. Approval of Items Discussed in Closed Session: The Committee reviewed and ratified the quarterly personnel changes report.
3. Opening Remarks and Approval of Minutes of the November 18, 2013 Meeting: The Committee reviewed and approved the minutes of the November 18, 2013 meeting.
4. Presentation of University's Annual Financial Report: The Committee received an overview of the university's annual financial report for the fiscal year ending June 30, 2013. The financial statements have been prepared in accordance with generally accepted accounting principles, and the Auditor of Public Accounts issued an unmodified (or clean) opinion. The university had total net position of \$1.43 billion at June 30, 2013, an increase of \$146.3 million or 11.4 percent since fiscal year 2012. The total unrestricted net assets, which are a measure of financial health of the institution, increased by \$17 million or 6.4 percent to \$282.6 million. The university's unrestricted net position has increased by \$104.2 million or 58 percent since fiscal year 2010. Total revenues for fiscal year 2013 were \$1.3 billion, an increase of \$113.5 million or 9.6 percent over previous year. The majority of the growth in operating revenues came from student tuition and fees and grants and contracts. Total operating expenses for fiscal year 2013 were \$1.15 billion, an increase of \$79.2 million or 7.4 percent over previous year. The increase is primarily due to increase in salaries, wages, and fringe benefits in the instructional and research expense categories.
5. Update on JLARC Study on Higher Education: The Committee received an update on the JLARC Study on Higher Education Cost Efficiency. The 2012 General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to conduct a study on cost efficiency of the public higher education institutions in Virginia and to identify opportunities to reduce the cost of public higher education in Virginia. JLARC has issued two reports in the study series earlier. The third JLARC report on Academic Spending and Workload released on December 9, 2013 addressed the topics of instructional spending, faculty compensation, faculty workload, research spending, instructional technology, and research and instructional facilities. The report included six

recommendations for consideration by the General Assembly, SCHEV, and the Boards of Visitors of higher education institutions in the areas of faculty compensation, faculty workload, research spending, instructional technology, and instructional and research space.

6. Report on VT Applied Research Corporation (VT-ARC) Financial Status: The Committee received a report on the ongoing operational performance and status of the VT Applied Research Corporation (VT-ARC). At the November 2013 Board of Visitors meeting, the Committee received and approved a \$2 million loan, as a line of credit, to be made available to VT-ARC to support its ongoing operations as it transitions from start-up status. This report is in response to the Committee's request during the November meeting that the university provide an update regarding the operational performance of VT-ARC, in context of the approved loan. VT-ARC's actual revenues and projected revenues from contract backlog for FY 2014 are trending upwards. VT-ARC expects to see the upward trend to continue in FY 2015. VT-ARC's Board of Directors is currently in the process of reviewing and establishing performance milestones. Final approval of milestones is expected at the VT-ARC's April 2014 Board of Directors meeting.
7. Report on the 2014 Legislative Session: The Committee received a report on the results of the 2014 legislative session, including the Governor's Executive Budget presented on December 16, 2013. The General Assembly session opened on January 8th, 2014 and was scheduled to complete its work by March 8th, 2014. The General Assembly was not able to approve a budget by March 8th and will reconvene in a special session commencing on March 24th. This report presents the major elements of the Executive Budget and General Assembly actions for the 2014-2016 biennium. As of March 6th, the House budget includes \$9.3 million and the Senate budget includes \$6.2 million in incremental General Fund allocation for FY 2014-15. This report covered the current status of the budget.
- * 8. Approval of Year-to-Date Financial Performance Report (July 1, 2013 – December 31, 2013): The Committee reviewed the Year-to-Date Financial Performance Report for July 1, 2013 – December 31, 2013. For the second quarter, all programs of the university are on target and routine budget adjustments were made to reflect changes in revenues and expenditure budgets in academic and administrative areas.

During the second quarter, the annual budget for Tuition and Fee has been increased by \$6.7 million for strong fall enrollment. The actual tuition and fee revenues are ahead of projections by approximately \$1.9 million due to the revenues from the first Wintermester program. All Other Income is higher than

projected due to milk and cattle sales, Veterinary Medicine Clinic sales, facility rental income, and activity in Language and Culture Institute. Routine budget adjustments have been made during the second quarter in several auxiliaries to reflect revenue and expenditure changes. Revenues in Residence and Dining Halls are higher than projected due to higher than anticipated dorm occupancy and Dining meal plan sales. Expenses for Intercollegiate Athletics are lower than projected due to the timing of operating expenses and one-time sports facility related projects.

For the quarter ending December 31, 2013, \$48.5 million had been expended for Educational and General capital projects, and \$9.9 million in expenditures were incurred for Auxiliary Enterprises capital projects. Capital outlay expenditures for the quarter ending December 31, 2013 totaled \$58.4 million.

The Committee recommended the Year-to-Date Financial Performance Report to the full Board for approval.

- * 9. Approval of 2014-2015 Compensation for Graduate Assistants: The Committee reviewed for approval the proposed 2014-15 schedule of stipends and support for the graduate health insurance program for graduate students who work as graduate assistants (including graduate teaching assistants and graduate research assistants) while pursuing master's or doctoral degrees. To be competitive in the recruitment and retention of high quality graduate students, it is important for the university to provide compensation packages that are comparable with those offered by peer institutions. The key components of the compensation packages are competitive stipends, tuition assistance, and health insurance. The university proposed advancing the stipend scale for 2014-15 by providing a 2.0 percent increase to be effective August 10, 2014. In addition to the base stipend, the university will enhance the academic year supplement of \$300 to \$400 to help mitigate university assigned costs. For 2014-15, the university proposes the continuation of graduate assistant health insurance coverage at 90 percent, based on university's current estimate of cost increase.

The Committee recommended the 2014-15 Compensation for Graduate Assistants to the full Board for approval.

Audit Closed Session

Board Members Present: Mr. Jim Chapman, Mr. B.K. Fulton, Ms. Deborah Petrine, Mr. Michael Quillen

VPI & SU Staff: Ms. Kay Heidbreder, Ms. Sharon Kurek, Dr. Tim Sands, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Dr. Charles W. Steger

1. Review and Acceptance of the following Internal Audit Reports issued: The Committee received and accepted the following Internal Audit reports:
 - a. Payment Card Industry Data Security Standard: The audit received a rating of improvements are recommended. Audit recommendations were issued to management in the areas of PCI DSS guidance for student organizations, merchants validation of compliance with PCI DSS, and use of strong cryptography. While Internal Audit reported that the university is making significant progress in achieving compliance with the standards, the report was presented in the closed session due to discussion of specific information technology security vulnerabilities.
 - b. Fleet and Parking Services: The audit received a rating of significant improvements are needed. Audit recommendations were issued to management in the areas of safeguards for cash handling, guidance for voiding citations, procedures for long-term visitor and VIP vehicle programs, permit refunds process, and fuel inventory leak checks. The report was presented in the closed session due to discussion of specific personnel matters.
 - c. Real Estate Management: The audit received a rating of unreliable. Audit recommendations were issued to management in the areas of system access controls; financial reconciliations of central leases; maintenance of a complete and accurate lease portfolio and payment of lease obligations; controls over income leases and license agreements; lease amendments and tenant improvements; oversight of leases paid with federal funding; and tracking of lease terminations, deeds, easements, and conveyance files. The report was presented in the closed session due to discussion of specific personnel actions that occurred during the audit and impacted results.
2. Update on Fraud, Waste, and Abuse Cases: The Committee received an update on the outstanding fraud, waste, and abuse cases.
3. Discussion with the Director of Internal Audit: The Director of Internal Audit discussed audits of specific departments and units where individual employees were identified.

Audit Open Session

Board Members Present: Mr. Jim Chapman, Mr. B.K. Fulton, Ms. Deborah Petrine

VPI & SU Staff: Mr. Al Cooper, Mr. John Cusimano, Mr. Brian Daniels, Dr. John Dooley, Ms. Annabelle Fuselier, Ms. Natalie Hart, Mr. Tim Hodge, Ms. Elizabeth Hooper, Ms. Sharon Kurek, Ms. Kim Linkous, Mr. Ken Miller, Ms. Terri Mitchell, Ms. Laura Neff-Henderson, Mr. Mark Owczarski, Ms. Lisa Royal, Mr. John Rudd, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Mr. Jeb Stewart, Mr. Brad Sumpter, Mr. Bob Walters, Mr. Chris Yianilos

Guests: Ms. Gargi Singh

1. Opening Remarks and Approval of Minutes of the November 18, 2013 Meeting: The Committee reviewed and approved the minutes of the November 18, 2013 meeting.
2. Review and Acceptance of University's Update of Responses to all Previously Issued Internal Audit Reports: The Committee reviewed the university's update of responses to all previously issued internal audit reports. As of September 30, 2013, the university had 28 open recommendations. Thirteen audit comments have been issued during the second quarter of this fiscal year. As of December 31, 2013, the university has addressed 21 comments, leaving 20 open recommendations in progress. Through February 25, 2014, Internal Audit has closed 14 of the 20 open recommendations. The Committee received a briefing at the meeting that reviewed the status of the outstanding comments, including the comments that have been addressed since December 31, 2013. The Committee commended the Internal Audit Director and the Staff on the thorough work done on the audits.

The Committee accepted the report.

3. Review of Internal Audit Department's Status Report as of December 31, 2013: The Committee reviewed the Internal Audit Department's Status Report as of December 31, 2013. Internal Audit has completed 55 percent of its audit plan in accordance with the fiscal year 2013-14 annual audit plan and previously reported modifications.
4. Review and Acceptance of the following Internal Audit Reports and Memos Issued: The Committee reviewed and accepted the following Internal Audit reports:

- a. Aerospace and Ocean Engineering: The audit received a rating of improvements are recommended. An audit recommendation was issued to management in the area of safety training for machine shop personnel. Additionally, a separate recommendation was issued to Environmental Health and Safety on the communication and follow-up of safety inspection reports.
- b. Computer Science: The audit received a rating of improvements are recommended. Audit recommendations were issued to management in the areas of appropriate usage of federally purchased computers, application security configuration, and the periodic review of logical access.
- c. Alson H. Smith Jr. AREC: The audit received a rating of improvements are recommended. Audit recommendations were issued to management in the areas of sponsored projects, health and safety, and funds handling. Additionally, a separate recommendation was issued to Environmental Health and Safety on the communication and follow-up of safety inspection reports.
- d. Middleburg AREC: The audit received a rating of improvements are recommended. An audit recommendation was issued to management in the area of health and safety.
- e. College of Agriculture and Life Sciences: The compliance review received a rating of significant improvements are needed. Audit recommendations were issued to management in the areas of fiscal responsibility, wage payroll, overtime compensation, leave reporting, expenditures, fixed assets management, funds handling, key control, information technology, emergency preparedness, and state vehicle management. Additionally, a recommendation was issued to Human Resources on the consistency of policy communications related to P14 appointments.
- f. Vice President for Diversity and Inclusion: The compliance review received a rating of improvements are recommended. Audit recommendations were issued to management in the areas of expenditures, funds handling, emergency preparedness, and state vehicle management.

5. Presentation of Auditor of Public Accounts Intercollegiate Athletics Programs Report for Year Ended June 30, 2013: The Committee received a report on the Auditor of Public Accounts' (APA) 2013 Intercollegiate Athletics Review. The APA performed certain agreed-upon procedures to the university's intercollegiate Athletics Programs for the fiscal year ended June 30, 2013, solely to assist the university in complying with National Collegiate Athletic Association (NCAA) bylaws. The university is responsible for the Intercollegiate Athletics Programs including preparation of the Schedule of Revenues and Expenses of Intercollegiate Athletics Programs. Total revenues of the Intercollegiate Athletics Programs for the year ended June 30, 2013 were \$70 million with the majority of revenues coming from football and basketball programs. Expenses for the year were \$66.6 million, and the excess of revenues over expenses were \$3.4 million. During the APA review, no matters were brought to the APA's attention that would lead them to believe the amounts of the Schedule of Revenues and Expenses should be adjusted. This review does not constitute an audit and therefore no opinion is issued. The Committee requested that a trend analysis of the NCAA conference allocations for previous years be provided to the Committee.
6. Review on Compliance with Audit Resolution of University-Related Corporations: The Committee received a compliance report for the audits of the university-related corporations. These corporations include Virginia Tech Foundation, Inc., Virginia Tech Services, Inc., Virginia Tech Intellectual Properties, Inc., and Virginia Tech Applied Research Corporation. Consistent with the Board of Visitors' resolution establishing university-related corporations, each corporation is annually required to provide audited annual financial statements, management letters from external auditors, and management's responses to the university's president. Each corporation is also required to submit an annual certification stating that all procedures outlined in the resolution have been met. All corporations are in full compliance with the Board of Visitors' requirements regarding audits.
7. Update on Federal Audit of National Science Foundation Research Funds: The Finance and Audit Committee received an update on the current status of the National Science Foundation audit. In the Spring of 2013, the Office of the Inspector General (OIG) for the National Science Foundation (NSF) announced it would perform "cost incurred performance audits" of eleven large institutes of higher education which have received significant funding from NSF. Virginia Tech was one of the universities selected for the audit. The OIG has selected Withum Smith and Brown (WSB), a public accounting firm, to perform Virginia Tech's audit. WSB has requested and the university has provided numerous data files of

transactions from the university's Finance and Human Resources systems for the entire period under audit (January 1, 2010 through December 31, 2012). WSM visited Virginia Tech onsite on two occasions and requested additional documentation in early February for costs charged to projects. The WSB auditors have provided the university with a list of questioned costs. Currently, the Office of Sponsored Programs and the Controller's Office personnel are actively working with the WSB auditors to understand the items on the list and to provide clarifications or supporting documents. It is still too early to determine the final impact of this audit. The university will continue to work with the WSB auditors regarding the potential questioned costs and will continue our efforts to limit the impact of this audit.

8. Review of Auditor of Public Accounts Statewide Reviews and Special Reports: The Committee received a report on the Auditor of Public Accounts Statewide Reviews and Special Reports. In addition to the annual audits of the University's financial statements and its Intercollegiate Athletics program, the Auditor of Public Accounts (APA) has included Virginia Tech along with other agencies in program reviews designed to assess controls on a statewide basis. These special reviews are included as a part of the APA's annual audit plan. The Committee reviewed a report that provides an analysis of the APA's statewide audit activities to date and the university's planned approach to manage and report on these audit activities.

Joint Open Session

Board Members Present: Mr. Jim Chapman, Mr. William Fairchild, Mr. B. K. Fulton, Mr. William Holtzman, Ms. Deborah Petrine, Mr. Michael Quillen, Mr. John Rocovich

VPI & SU Staff: Mr. Bob Broyden, Mr. Al Cooper, Mr. John Cusimano, Mr. Brian Daniels, Dr. John Dooley, Ms. Annabelle Fuselier, Ms. Natalie Hart, Mr. Tim Hodge, Ms. Elizabeth Hooper, Ms. Sharon Kurek, Ms. Heidi McCoy, Mr. Ken Miller, Ms. Laura Neff-Henderson, Ms. Kim O'Rourke, Mr. Mark Owczarski, Ms. Lisa Royal, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Mr. Ken Smith, Mr. Bob Spieldenner, Dr. Charles Steger, Mr. Jeb Stewart, Mr. Brad Sumpter, Dr. Sherwood Wilson, Mr. Chris Yianilos

Guests: Gargi Singh

1. Approval of Resolution for Constructing the Marching Virginians Practice Facility: The Committees reviewed for approval a resolution for constructing the Marching Virginians Practice Facility. The project scope includes an approximately 4,350 gross square foot building, a minimum 4,050 gross square foot outdoor covered pavilion attached to a main building, and a soccer-size artificial turf field with

lighting. The Board of Visitors had earlier approved a \$400,000 planning project for the facility in September 2013 and an \$800,000 supplement in November 2013 to begin grading and sitework to accommodate the desired fall 2014 start date for use of the field. This request is to move forward with a \$3.55 million authorization supplement for construction of the Marching Virginians Practice Facility. The university has developed a 100 percent nongeneral fund resource plan for this project. The total project cost is \$4.75 million and the funding plan is sufficient to cover this amount. Under the 2008 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has the authority to approve the budget, size, scope and funding of nongeneral funded major capital outlay projects.

The Committees recommended the Resolution for Constructing the Marching Virginians Practice facility to the full Board for approval.

2. Approval of Resolution for Planning the Health Center Improvements: The Committees reviewed for approval a resolution for planning the Health Center Improvements. The space assigned to the Schiffert Health Center is not adequate to fully support the service needs of the university's students. Current cramped conditions create privacy, confidentiality, treatment and access concerns for students and medical staff. In addition to the needs of the Health Center, the university's Campus Alcohol Abuse Prevention Center (CAAPC) does not have a permanent location to deliver its programs. The proposed solution is to construct a one story addition to the east wing of McComas Hall and to renovate an interior portion of the center. Overall, the 4,700 gross square foot project would include 3,000 gross square feet of new space and 1,700 gross square feet of renovation work. This would provide for better coordination of alcohol prevention and treatment services with Schiffert Health Center and Cook Counseling Center. As with all self-supporting projects, the university has developed a financing plan to support the project. This funding plan calls for the use of debt which may be serviced from Student Health auxiliary revenue. The target total project budget is \$2.868 million and annual debt service is estimated to be \$234,000. This request is for a \$200,000 planning authorization to move forward with authorizing Virginia Tech to design the Health Center Improvements funded with nongeneral fund revenues.

The Committees recommended the Resolution for Planning the Health Center Improvements to the full Board for approval.

3. Approval of Resolution for Planning the South Recreation Field Surface Replacement: The Committees reviewed for approval a resolution for planning the South Recreation Field Surface Replacement. Approximately 6,300 students participate in intramural and club sports programs conducted on the south recreation field. The existing South Recreation Field area is nine-acres of natural turf that cannot fully support student demand for teams of existing sports and is subject to inclement weather that results in cancelled games and shortened seasons. The extension of the airport runway will consume a portion of the existing fields which will further reduce the number of students that may participate in recreational programs. The proposed project would replace the natural turf field with a synthetic turf field, install lighting and fencing around the fields, and install an asphalt path to allow for maintenance vehicle traffic and to provide a jogging and walking path. The university has developed a 100 percent nongeneral fund resource plan for the project which includes \$230,000 of planning work. This request is to authorize the university to move forward with the \$230,000 planning authorization for the South Recreation Field Surface Replacement project and to secure temporary short-term financing through any borrowing mechanism when such borrowing has been approved by the Board of Visitors.

The Committees recommended the Resolution for Planning the South Recreation Field Surface Replacement to the full Board for approval.

4. Approval of Resolution for New Athletic Field House Financing Plan: The Committees reviewed for approval a resolution for new Athletic Field House Financing Plan. The State authorized in 2006 a \$25 million capital outlay project for a new indoor athletic training facility with a funding plan that calls for debt to be repaid entirely by private gifts. The scope of the authorization includes 120,000 gross square feet of an athletic field house facility programmed for multipurpose activity and sized to accommodate sufficient length, width, and height necessary for football practice work. The Athletics program has conducted early planning work, site selection, and identification of a desired Design-Build team. The envisioned facility has a project cost of \$21.3 million and the campaign for private support has raised \$12.4 million for project cost. The Athletics department has requested to move forward with the project under an interim financing plan while the campaign efforts continue to fully fund the project. The interim financing plan will enable Athletics to work towards the desired goal to start construction in summer 2014 with occupancy in August 2015. This request is for authorization to implement an interim financing plan that includes \$7.4 million of private fund cash, \$5 million of temporary financing to carry payment of

existing pledges, and \$8.9 million of temporary financing to carry completion of raising private commitments.

The Committees recommended the Resolution for New Athletic Field House Financing Plan to the full board for approval.

***Requires full Board approval.**

There being no further business, the meeting adjourned at 11:42 a.m.

Update to Responses to Open Internal Audit Comments

FINANCE AND AUDIT COMMITTEE

February 25, 2013

As part of the internal audit process, university management participates in the opening and closing conferences and receives copies of all Internal Audit final reports. The audited units are responsible for implementing action plans by the agreed upon implementation dates, and management is responsible for ongoing oversight and monitoring of progress to ensure solutions are implemented without unnecessary delays. Management supports units as necessary when assistance is needed to complete an action plan. As units progress toward completion of an action plan, Internal Audit performs a follow up visit within two weeks after the target implementation date. Internal Audit is responsible for conducting independent follow up testing to verify mitigation of the risks identified in the recommendation and formally close the recommendation. As part of management's oversight and monitoring responsibility, this report is provided to update the Finance and Audit Committee on the status of outstanding recommendations. Management reviews and assesses recommendations with university-wide implications and shares the recommendations with responsible administrative departments for process improvements, additions or clarification of university policy, and inclusion in training programs and campus communications. Management continues to emphasize the prompt completion of action plans.

The report includes outstanding recommendations from Compliance Reviews and Audit Reports. Consistent with the report presented at the December Board meeting, the report of open recommendations includes three attachments. Attachment A summarizes each audit in order of final report date with extended and on-schedule open recommendations. Attachment B details all open high or medium priority recommendations for each audit in order of the original target completion date, and with an explanation for those having revised target dates or revised priority levels. Attachment C charts performance in implementing recommendations on schedule over the last seven years. The 96.8 percent on-schedule rate for FY 2014 reflects closing 30 of 31 recommendations by the original due date.

The report presented at the November 18, 2013 meeting covered Internal Audit reports reviewed and accepted through September 30, 2013 and included twenty-eight open medium and high priority recommendations. Activity for the quarter ended December 31, 2013 resulted in the following:

Open recommendations as of September 30, 2013	28
Add: Medium & High priority recommendations accepted November 18, 2013	13
Subtract: recommendations addressed since September 30, 2013	21
Remaining open recommendations as of December 31, 2013	<u>20</u>

While this report is prepared as of the end of the quarter, management continues to receive updates from Internal Audit regarding auditee progress on action plans. Through February 25, 2014, Internal Audit has closed 14 of the 20 outstanding medium and high priority recommendations. The remaining six open recommendations are progressing as expected and are on track to meet their respective target due dates. Management is working jointly with all the units and providing assistance as needed to ensure the action plans are completed timely.

ATTACHMENT A

Open Recommendations by Priority Level

FINANCE AND AUDIT COMMITTEE

December 31, 2013

Report Date	Audit Name	Audit Number	Total Recommendations						
			ISSUED	COMPLETED	OPEN				
					Extended		On-schedule		Total
					High	Medium	High	Medium	Open
22-Aug-12	Equine Medical Center	12-1061	7	4			2	1	3
07-Mar-13	IT Disaster Recovery	13-1097	3				2	1	3
08-Aug-13	International Affairs	13-1109	3					3	3
14-Aug-13	Outsourced Cloud Services	13-1110	1					1	1
28-Oct-13	College of Natural Resources and Environment	14-1132	4					4	4
29-Oct-13	Student Residency Status	14-1133	2	1				1	1
29-Oct-13	Research: Biosafety	14-1135	3					3	3
30-Oct-13	Housing and Residence Life	14-1134	2	1			1		1
31-Oct-13	External Data Interfaces and Wire Transfers	13-1126	2	1				1	1
Totals:			27	7	0	0	5	15	20

ATTACHMENT B

Internal Audit Open Recommendations

FINANCE AND AUDIT COMMITTEE

December 31, 2013

Report Date	Item	Audit Number	Audit Name	Recommendation Name	Priority		Target Date		Follow Up Status	Status of Recommendations with Revised Priority / Target Dates
					Original	Revised	Original	Revised		
07-Mar-13	1	13-1097	IT Disaster Recovery	Inadequate Backup and Recovery Procedures	High		2-Jan-14		1	
07-Mar-13	2	13-1097	IT Disaster Recovery	Incomplete Division of Information Technology DRP Documentation	Medium		2-Jan-14		1	
28-Oct-13	3	14-1132	College of Natural Resources and Environment	Overtime Compensation	Medium		31-Jan-14		1	
28-Oct-13	4	14-1132	College of Natural Resources and Environment	Expenditures	Medium		31-Jan-14		1	
29-Oct-13	5	14-1135	Research: Biosafety	University Policy for Biosafety-Related Research	Medium		1-Feb-14		1	
29-Oct-13	6	14-1135	Research: Biosafety	Post-Approval Monitoring of Protocols	Medium		1-Feb-14		1	
22-Aug-12	7	12-1061	Equine Medical Center	Perpetual Inventory	High		15-Feb-14		1	
22-Aug-12	8	12-1061	Equine Medical Center	Separate Accounting System	High		15-Feb-14		1	
22-Aug-12	9	12-1061	Equine Medical Center	Past Due Notifications	Medium		15-Feb-14		1	
07-Mar-13	10	13-1097	IT Disaster Recovery	Undefined University Policy and Procedures for Disaster Recovery Planning	High		1-Mar-14		1	
28-Oct-13	11	14-1132	College of Natural Resources and Environment	Funds Handling	Medium		1-Mar-14		1	
28-Oct-13	12	14-1132	College of Natural Resources and Environment	Emergency Preparedness	Medium		1-Mar-14		1	
14-Aug-13	13	13-1110	Outsourced Cloud Services	Incomplete Planning for Outsourced Cloud Services	Medium		08-Apr-14		2	
31-Oct-13	14	13-1126	External Data Interfaces and Wire Transfers	Integrity of Submitted Data (Accounts Payable and Payroll)	Medium		30-Apr-14		2	
28-Oct-13	15	14-1133	Student Residency Status	Residency Monitoring	Medium		30-Apr-14		2	
29-Oct-13	16	14-1135	Research: Biosafety	Identification and Reporting of All Biosafety-Related Research to the IBC	Medium		01-Jun-14		2	
08-Aug-13	17	13-1109	International Affairs	Personnel Activity Reports	Medium		31-Aug-14		2	

ATTACHMENT B

Internal Audit Open Recommendations

FINANCE AND AUDIT COMMITTEE

December 31, 2013

Report Date	Item	Audit Number	Audit Name	Recommendation Name	Priority		Target Date		Follow Up Status	Status of Recommendations with Revised Priority / Target Dates
					Original	Revised	Original	Revised		
08-Aug-13	18	13-1109	International Affairs	Cost Transfers	Medium		31-Aug-14		2	
30-Oct-13	19	14-1134	Housing and Residence Life	Summer Conferences and Camps	High		15-Sep-14		2	
08-Aug-13	20	13-1109	International Affairs	Education Abroad	Medium		01-Oct-14		2	

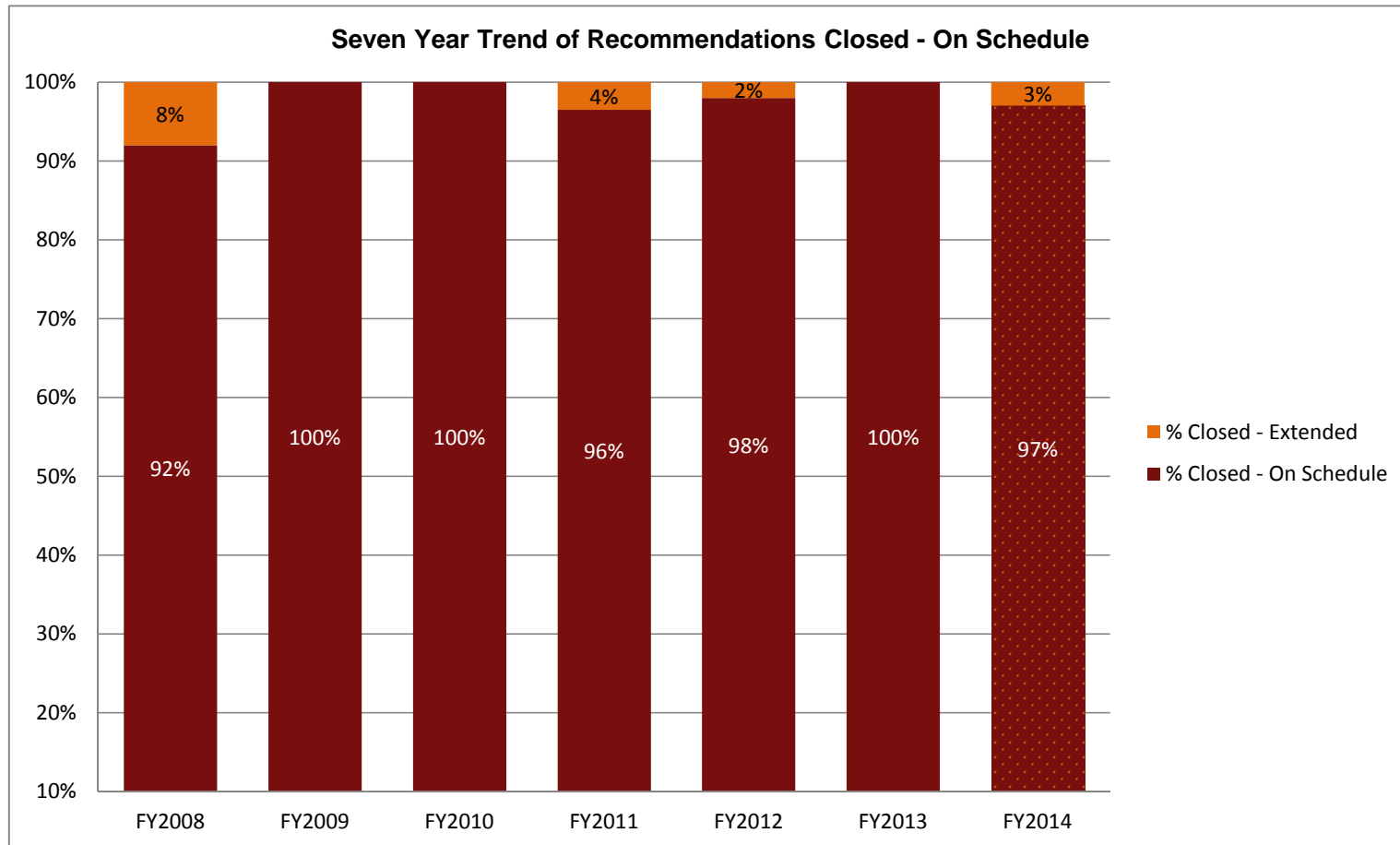
- (1) As of December 31, 2013, management confirmed during follow up discussions with Internal Audit that actions are occurring and the target date will be met. The Internal Audit department will conduct testing after the due date to confirm that the Management Action Plan is implemented in accordance with the recommendations.
- (2) Target date is beyond current calendar quarter. Management has follow-up discussions with the auditor to monitor progress, to assist with actions that may be needed to meet target dates, and to assess the feasibility of the target date.

ATTACHMENT C

Management Performance and Trends Regarding Internal Audit Recommendations

FINANCE AND AUDIT COMMITTEE

December 31, 2013



Internal Audit Status Report
FINANCE AND AUDIT COMMITTEE

February 25, 2014

Audit Plan Update

Audits were performed in accordance with the fiscal year 2013-14 annual audit plan at a level consistent with the resources of the Department of Internal Audit. Eight audit projects have been completed since the November board meeting. Additionally, three advisory service projects were completed at management's request. These include two separate reviews for the College of Engineering and a review of the Hume Center. Due to personnel turnover within Internal Audit, the risked-based review of the Institute for Society, Culture, and Environment has been postponed.

The following five audit projects are underway: Athletics: Operations; Continuing and Professional Education; IT: Windows Server Security; Procurement and Accounts Payable; and Human Development. So far in fiscal year 2013-14, Internal Audit has completed 55 percent of its audit plan as depicted in Exhibit 1.

Exhibit 1
FY 2013-14 Completion of Audit Plan

Audits	
Total # of Audits Planned	26
Total # of Supplemental Audits	3
Total # of Carry Forwards	1
Total # of Planned Audits Canceled and/or Deferred	1
Total Audits in Plan as Amended	29
Total Audits Completed	16
Audits - Percentage Complete	55%
Note: Includes Compliance Reviews and Advisory Services	

Review and Acceptance of Internal Audit Reports Issued

FINANCE AND AUDIT COMMITTEE

February 25, 2014

Background

In concurrence with the fiscal year 2013-14 Internal Audit Plan approved by the Finance and Audit Committee at the September 9, 2013 Board of Visitors meeting, the department has completed six risk-based audits and two compliance reviews during this reporting period. Note that while the Alson H. Smith Jr. and Middleburg Agriculture Research and Extension Centers (ARECs) are reported separately below, the audits were conducted as one audit project. This report provides a summary of the ratings issued during the period and the rating system definitions. Internal Audit continues to make progress on the annual audit plan.

Ratings Issued This Period

Aerospace and Ocean Engineering	Improvements are Recommended
Computer Science	Improvements are Recommended
Alson H. Smith Jr. AREC	Improvements are Recommended
Middleburg AREC	Improvements are Recommended
College of Agriculture and Life Sciences	Significant Improvements are Needed
Vice President for Diversity and Inclusion	Improvements are Recommended

Summary of Audit Ratings

Internal Audit's rating system has four tiers from which to assess the controls designed by management to reduce exposures to risk in the area being audited. The auditor can use professional judgment in constructing the exact wording of the assessment in order to capture varying degrees of deficiency or significance.

Definitions of each assessment option

Effective – The audit identified opportunities for improvement in the internal control structure, but business risks are adequately controlled in most cases.

Improvements are Recommended – The audit identified occasional or isolated business risks that were not adequately or consistently controlled.

Significant or Immediate Improvements are Needed – The audit identified several control weaknesses that have caused, or are likely to cause, material errors, omissions, or irregularities to go undetected. The weaknesses are of such magnitude that senior management should undertake immediate corrective actions to mitigate the associated business risk and possible damages to the organization.

Unreliable – The audit identified numerous significant business risks for which management has not designed or consistently applied controls prior to the audit. Persistent and pervasive control weaknesses have caused or could cause significant errors, omissions, or irregularities to go undetected. The weaknesses are of such magnitude that senior management must undertake immediate corrective actions to bring the situation under control and avoid (additional) damages to the organization.

RECOMMENDATION:

That the internal audit reports reviewed above be accepted by the Finance and Audit Committee.

**Presentation of Auditor of Public Accounts Intercollegiate Athletics Programs
Report for Year Ended June 30, 2013**

FINANCE AND AUDIT COMMITTEE

February 25, 2014

The Auditor of Public Accounts (APA) performed certain agreed-upon procedures to evaluate whether the Schedule of Revenues and Expenses of Intercollegiate Athletics Program of the University is in compliance with National Collegiate Athletic Association (NCAA) Bylaw 3.2.4.16, for the year ended June 30, 2013. The APA did not perform an audit of the financial statements of the Intercollegiate Athletics Programs, so no opinion was issued. The APA performed procedures that addressed internal controls, affiliated and outside organizations, schedule of revenues and expenses of intercollegiate athletics programs, and separate procedures for specific revenues and expenses. During the APA review, no matters were brought to the APA's attention that would lead them to believe the amounts on the Schedule of Revenues and Expenses should be adjusted.

The purpose of the Schedule is to present a summary of revenues and expenses of the intercollegiate athletics programs of the university for the year ended June 30, 2013. Total revenues of the Intercollegiate Athletics Programs for the year ended June 30, 2013 were \$70 million with the majority of the revenues coming from the football and basketball programs. Expenses for the year were \$66.6 million, and the excess of revenues over expenses were \$3.4 million.

See the attachment for the actual APA report on the Schedule of Revenues and Expense of Intercollegiate Athletics Programs for the year ended June 30, 2013.

Presentation Date: March 24, 2014



**VIRGINIA POLYTECHNIC INSTITUTE
AND
STATE UNIVERSITY**

**INTERCOLLEGIATE ATHLETICS PROGRAMS
FOR THE YEAR ENDED
JUNE 30, 2013**

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Commonwealth of Virginia

Auditor of Public Accounts

Martha S. Mavredes, CPA
Auditor of Public Accounts

P.O. Box 1295
Richmond, Virginia 23218

December 13, 2013

The Honorable Robert F. McDonnell
Governor of Virginia

The Honorable John M. O'Bannon, III
Chairman, Joint Legislative Audit
And Review Commission

Charles W. Steger
President, Virginia Polytechnic Institute and State University

INDEPENDENT AUDITOR'S REPORT ON THE APPLICATION OF AGREED-UPON PROCEDURES

We have performed the procedures enumerated below, which were agreed to by the President of the **Virginia Polytechnic Institute and State University**, solely to assist the University in evaluating whether the accompanying Schedule of Revenues and Expenses of Intercollegiate Athletics Programs of the University is in compliance with National Collegiate Athletic Association (NCAA) Constitution 3.2.4.16, for the year ended June 30, 2013. University management is responsible for the Schedule of Revenues and Expenses of Intercollegiate Athletics Programs and the Schedule's compliance with NCAA requirements. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of the University. Consequently, we make no representation regarding sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

Agreed-Upon Procedures Related to the Schedule of Revenues and Expenses of Intercollegiate Athletics Programs

The procedures that we performed and our findings are as follows:

Internal Controls

1. We reviewed documentation of accounting systems and operating procedures. We reviewed the relationship of internal control over Intercollegiate Athletics Programs to internal control reviewed in connection with our audit of the University's financial statements. In addition, we identified and reviewed those controls unique to Intercollegiate Athletics Programs, which were not reviewed in connection with our audit of the University's financial statements.
2. Intercollegiate Athletics Department management provided an organizational chart which we reviewed with appropriate personnel. We also made certain inquiries of management regarding control consciousness, the use of internal audit in the department, competence of personnel, and protection of records and equipment.

3. Intercollegiate Athletics Department management provided us with their procedures for gathering information on the nature and extent of affiliated and outside organizational activity for or on behalf of the Intercollegiate Athletics Programs.

Affiliated and Outside Organizations

4. Intercollegiate Athletics Department management identified all intercollegiate athletics-related affiliated and outside organizations and provided us with copies of audited financial statements for each such organization for the reporting period.
5. Intercollegiate Athletics Department management prepared and provided to us a summary of revenues and expenses for or on behalf of the intercollegiate athletics programs by affiliated and outside organizations included in the Schedule.
6. Intercollegiate Athletics Department management provided to us any additional reports regarding internal control matters identified during the audits of affiliated and outside organizations performed by independent public accountants. We were not made aware of any internal control findings.

Schedule of Revenues and Expenses of Intercollegiate Athletics Programs

7. Intercollegiate Athletics Department management provided to us the Schedule of Revenues and Expenses of Intercollegiate Athletics Programs (Schedule) for the year ended June 30, 2013, as prepared by the University and shown in this report. We recalculated the addition of the amounts in the Schedule, traced the amounts on the Schedule to management's worksheets, and agreed the amounts in management's worksheets to the Intercollegiate Athletics Department's accounts in the accounting records. We noted no differences between the amounts in the Intercollegiate Athletics Department's accounts in the accounting records and the amounts on the worksheets. We discussed the nature of work sheet adjustments with management and are satisfied that the adjustments are appropriate.
8. We applied certain analytical review techniques to the revenue and expense amounts reported in the Schedule in order to determine the reasonableness of amounts reported therein. These techniques included trend analyses and review of actual amounts in comparison to budget estimates. We obtained and documented an understanding of significant variations.

Revenues

9. Intercollegiate Athletics Department management provided us with a reconciliation of tickets sold during the reporting period along with complimentary tickets and unsold tickets to the revenue recorded in the Schedule and related attendance figures. We reviewed these reconciliations for selected games and found such reconciliations to be accurate and agreed them to the amounts recorded as ticket revenue for those games.
10. We compared student fees reported in the Schedule to amounts reported in the accounting records and amounts from the University's comprehensive fee allocated to intercollegiate athletics. We found these amounts to be materially in agreement.
11. Intercollegiate Athletics Department management provided us with settlement reports and game guarantee agreements for away games during the reporting period. This amount was deemed to be immaterial for detailed testing.

12. Intercollegiate Athletics Department management provided us with a listing of all contributions of moneys, goods or services received directly by the Intercollegiate Athletics Programs from any affiliated or outside organization, agency or group of individuals that constitutes ten percent or more of all contributions received during the reporting period. Except for contributions received from the Virginia Tech Foundation, an affiliated organization, we noted no individual contribution which constituted more than ten percent of total contributions received for Intercollegiate Athletics Programs.
13. From the summary revenues and expenses for or on behalf of the Intercollegiate Athletics Programs by affiliated and outside organizations, we agreed contribution amounts to supporting documentation and proper posting in the accounting records. We found all reviewed transactions to be in agreement.
14. We obtained amounts reported in the Schedule for direct state or other governmental support, direct institutional support, and indirect facilities and administrative support. These amounts were deemed to be immaterial for detailed testing.
15. Intercollegiate Athletics Department management provided us with a listing and copies of all agreements related to participation in revenues from tournaments, conference distributions, and NCAA distributions. We gained an understanding of the terms of the agreements and agreed selected amounts to proper posting in the accounting records and supporting documentation.
16. Intercollegiate Athletics Department management provided us with a listing and copies of all agreements related to participation in revenues from broadcast, television, radio, and internet rights. We gained an understanding of the terms of the agreements and agreed selected amounts to proper posting in the accounting records and supporting documentation.
17. Intercollegiate Athletics Department management provided us with a listing and copies of all agreements related to participation in revenues from royalties, advertisements, and sponsorships. We gained an understanding of the terms of the agreements and agreed selected amounts to proper posting in the accounting records and supporting documentation.
18. We obtained and inspected endowment agreements to gain an understanding of the relevant terms and conditions of the agreement. We compared the use and classification of endowment and investment income to the corresponding endowment agreement.

Expenses

19. Intercollegiate Athletics Department management provided us a listing of institutional student aid recipients during the reporting period. We selected individual student-athletes across all sports and agreed amounts from the listing to their award letter. We also ensured that the total aid amount for each sport materially agreed to amounts reported as Financial Aid in the student accounting system.
20. Intercollegiate Athletics Department management provided us with settlement reports and game guarantee agreements for home games during the reporting period. We reviewed these settlement reports and guarantee agreements for selected games and agreed selected amounts to proper posting in the accounting records and supporting documentation.

21. Intercollegiate Athletics Department management provided us with a listing of coaches, support staff, and administrative personnel employed and paid by the University during the reporting period. We selected and tested individuals and compared amounts paid during the fiscal year from the payroll accounting system to their contract or other employment agreement document. We found that recorded expenses equaled amounts paid as salary and bonuses and were in agreement with approved contracts or other documentation.
22. Intercollegiate Athletics Department management provided us with a listing of coaches, support staff, and administrative personnel employed and paid by third-parties during the reporting period. This amount was deemed to be immaterial for detailed testing.
23. Intercollegiate Athletics Department management provided us with a listing of severance payments made during the reporting period. This amount was deemed to be immaterial for detailed testing.
24. We discussed the Intercollegiate Athletics Department's recruiting expense and team travel policies with Intercollegiate Athletics Department management and documented an understanding of those policies. We compared these policies to existing University and NCAA policies and noted substantial agreement of those policies.
25. We obtained an understanding of the University's methodology for allocating indirect facilities support and ensured that amounts reported on the Schedule agreed to amounts recorded in the accounting records.
26. Based on disbursements as listed in the accounting records, we selected and tested payments to third parties by the Intercollegiate Athletics Programs. These disbursements were for the various activities listed within the Schedule. We compared and agreed the selected operating expenses to adequate supporting documentation. We found all reviewed amounts to be properly approved, in agreement with supporting documentation, and properly recorded in the accounting records.

We were not engaged to, and did not, conduct an examination, the objective of which would be the expression on an opinion on the Schedule of Revenues and Expenses of Intercollegiate Athletics Programs or any of the accounts or items referred to above. Accordingly, we do not express such an opinion. Had we performed additional procedures or had we conducted an audit of any financial statements of the Intercollegiate Athletics Department of Virginia Polytechnic Institute and State University in accordance with generally accepted auditing standards, other matters might have come to our attention that would have been reported to the University. This report relates only to the accounts and items specified above and does not extend to the financial statements of Virginia Polytechnic Institute and State University or its Intercollegiate Athletics Department taken as a whole.

This report is intended solely for the information and use of the President and the University and is not intended to be and should not be used by anyone other than these specified parties. However, this report is a matter of public record and its distribution is not limited.

AUDITOR OF PUBLIC ACCOUNTS

EMS/alh

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
SCHEDULE OF REVENUES AND EXPENSES OF
INTERCOLLEGIATE ATHLETICS PROGRAMS
For the year ended June 30, 2013

	Football	Men's Basketball	Women's Basketball	Men's Other Sports	Women's Other Sports	Non-Program Specific	Total
Operating revenues:							
Ticket sales	\$ 14,259,840	\$ 2,301,635	\$ 125,204	\$ -	\$ -	\$ 3,060	\$ 16,689,739
Student fees	-	-	-	-	2,165,582	5,441,153	7,606,735
Guarantees	500,000	-	-	15,500	6,200	-	521,700
Contributions	9,003,612	449,506	573,395	2,352,173	2,904,901	1,316,015	16,599,602
Compensation and benefits provided by a third party	185,000	-	-	-	-	-	185,000
Direct state or other government support	-	-	-	-	-	645	645
Direct institutional support	-	-	-	-	-	281,359	281,359
NCAA conference distributions including all tournament revenues	9,052,533	6,784,756	34,634	228,073	123,696	1,678,966	17,902,658
Broadcast television, radio and internet rights	3,220,455	873,119	218,280	-	-	-	4,311,854
Program sales, concessions, novelty sales, and parking	1,232,870	54,751	11,374	33,798	10,482	353,218	1,696,493
Royalties, advertisements and sponsorships	1,163,405	126,809	61,702	112,000	118,500	484,113	2,066,529
Endowment and investment income	513,355	128,475	97,161	500,294	667,120	80,953	1,987,358
Other	4,975	-	-	50,564	50,564	74,712	180,815
Total operating revenues	<u>39,136,045</u>	<u>10,719,051</u>	<u>1,121,750</u>	<u>3,292,402</u>	<u>6,047,045</u>	<u>9,714,194</u>	<u>70,030,487</u>
Operating expenses:							
Athletic student aid	3,277,245	416,177	577,001	2,364,871	3,226,094	375,707	10,237,095
Guarantees	718,750	409,500	41,989	25,626	7,500	-	1,203,365
Coaching salaries, benefits, and bonuses	5,709,487	2,172,611	860,218	1,812,579	1,506,889	-	12,061,784
Coaching other compensation and benefits paid by a third-party	185,000	-	-	-	-	-	185,000
Support staff and administrative salaries, benefits and bonuses	1,689,811	269,340	181,680	61,811	103,094	7,856,699	10,162,435
Severance payments	64,491	12,047	17,941	5,538	4,415	28,444	132,876
Recruiting	353,983	237,297	163,383	249,393	190,116	2,000	1,196,172
Team travel	1,651,863	400,114	343,654	917,140	914,436	59,169	4,286,376
Equipment, uniforms, and supplies	508,847	123,007	104,221	393,297	464,953	69,907	1,664,232
Game expenses	1,738,231	387,526	212,046	305,492	193,037	375,659	3,211,991
Fund-raising, marketing and promotions	335,860	352,029	103,977	86,149	50,805	441,221	1,370,041
Direct facilities, maintenance and rental	7,276,321	436,105	438,797	476,801	542,196	7,614,035	16,784,255
Spirit groups	272,921	18,932	11,084	-	-	106,343	409,280
Medical expenses and medical insurance	155,372	27,445	28,515	180,073	136,468	317,016	844,889
Memberships and dues	2,039	1,020	1,308	7,096	3,220	27,379	42,062
Other	1,122,963	232,150	101,701	246,709	138,132	948,416	2,790,071
Total operating expenses	<u>25,063,184</u>	<u>5,495,300</u>	<u>3,187,515</u>	<u>7,132,575</u>	<u>7,481,355</u>	<u>18,221,995</u>	<u>66,581,924</u>
Excess (deficiency) of revenues over (under) expenses	<u>\$ 14,072,861</u>	<u>\$ 5,223,751</u>	<u>\$ (2,065,765)</u>	<u>\$ (3,840,173)</u>	<u>\$ (1,434,310)</u>	<u>\$ (8,507,801)</u>	<u>\$ 3,448,563</u>

The accompanying Notes to the Schedule of Revenues and Expenses of Intercollegiate Athletics Programs are an integral part of this Schedule.

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
NOTES TO THE SCHEDULE OF REVENUES AND EXPENSES OF
INTERCOLLEGIATE ATHLETICS PROGRAMS
AS OF JUNE 30, 2013

1. BASIS OF PRESENTATION

The accompanying Schedule of Revenues and Expenses of Intercollegiate Athletics Programs has been prepared on the accrual basis of accounting. The purpose of the Schedule is to present a summary of revenues and expenses of the intercollegiate athletics programs of the University for the year ended June 30, 2013. The Schedule includes those intercollegiate athletics revenues and expenses made in behalf of the University's athletics programs by outside organizations not under the accounting control of the University. Because the Schedule presents only a selected portion of the activities of the University, it is not intended to and does not present either the financial position, changes in fund balances, or cash flows for the year then ended. Revenues and expenses directly identifiable with each category of sport presented are reported accordingly. Revenues and expenses not directly identifiable to a specific sport are reported under the category "Non-Program Specific."

2. AFFILIATED ORGANIZATIONS

The University received \$18,451,525 from the Virginia Tech Foundation, Inc. Approximately \$10,152,106 of these funds were used for grant-in-aid scholarships for student-athletes. These amounts received are included in the accompanying schedule as follows: \$16,599,602 is included in the Contributions line item and \$1,851,923 is included in the Endowment and Investment Income line item.

3. LONG-TERM DEBT

In October 1996, a revenue bond of \$6,250,000 was issued for the Athletic Department. This bond was issued for athletic facility improvements. The majority of this debt was refinanced in May 2004 with a \$4,155,000 revenue bond. This bond has an outstanding balance of \$1,435,000 and will be repaid with general operating revenues through 2016.

In October 2001, a \$26,285,000 note was issued for the Athletic Department. This note was issued for the South End Zone addition to Lane Stadium. Part of the original debt was refinanced in January 2008 with a \$2,860,000 note that will be repaid through 2020 and has an outstanding balance of \$2,815,000. The remaining original debt issuance was refinanced in February 2011 with an \$11,540,000 note that will be repaid through 2027 and has an outstanding balance of \$10,820,000.

In May 2004, a \$52,715,000 revenue bond was issued for the Athletic Department. This bond was issued for the West Side Expansion to Lane Stadium which was substantially completed in 2006. The majority of this debt was refinanced in November 2012 with a \$32,365,000 note. This note has an outstanding balance of \$31,370,000 and will be repaid with private fund raising and operating revenues through 2029. The remaining original debt issuance has an outstanding balance of \$1,490,000 and will be repaid with private fund raising and operating revenues through 2014.

In November 2009, an \$8,705,000 note was issued for the Athletic Department. This note was issued for the Hahn Hurst Basketball Practice Center which was substantially complete in 2009. This note

has an outstanding balance of \$7,875,000 and will be repaid with private fund raising and operating revenues through 2030.

A summary of future principal and interest commitments for fiscal years subsequent to June 30, 2013 is presented as follows:

<u>Year Ended June 30, 2013</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2014	\$ 3,005,000	\$ 2,438,088	\$ 5,443,088
2015	3,060,000	2,257,288	5,317,288
2016	3,195,000	2,108,850	5,303,850
2017	2,825,000	1,945,925	4,770,925
2018	2,955,000	1,804,781	4,759,781
2019-2023	17,040,000	6,669,462	23,709,462
2024-2028	19,675,000	2,520,137	22,195,137
2029-2030	<u>4,050,000</u>	<u>107,000</u>	<u>4,157,000</u>
Total	<u>\$ 55,805,000</u>	<u>\$ 19,851,531</u>	<u>\$ 75,656,531</u>

4. UNIVERSITY ADMINISTRATION FEE

As with all auxiliary enterprises, the University charges the Athletic Department an administrative fee. During the fiscal year, the Department paid \$3,335,234 to the University. This amount is included in the Direct Facilities, Maintenance, and Rental line and includes \$98,332 in Football and \$3,236,902 in the Non-Program Specific category.

5. CAPITAL ASSETS

Capital assets consisting of buildings, infrastructure, and equipment are stated at appraised historical cost or actual cost where determinable. Construction in progress (CIP) is capitalized at actual cost as expenses are incurred. There were no activities related to CIP in FY13. All gifts of capital assets are recorded at fair market value as of the donation date.

Equipment is capitalized when the unit acquisition cost is \$2,000 or greater and the estimated useful life is one year or more. Software is capitalized when the acquisition and/or the development costs exceed \$50,000. Renovation costs are capitalized when expenses total more than \$100,000, the asset value significantly increases, or the useful life is significantly extended. Routine repairs and maintenance are charged to operating expense in the year the expense is incurred.

Depreciation is computed using the straight-line method over the useful life of the assets. The useful life is 40 to 60 years for buildings, 10 to 50 years for infrastructure and land improvements, and 3 to 30 years for fixed and movable equipment.

A summary of changes in capital assets follows for the year ending June 30, 2013 (*all dollars in thousands*):

	<u>Beginning Balance</u>	<u>Additions</u>	<u>Retirements</u>	<u>Ending Balance</u>
Depreciable capital assets:				
Buildings	\$143,555	\$ 1,010	\$ 7	\$144,558
Moveable equipment	5,515	315	286	5,544
Software	-	165	-	165
Fixed equipment	7,509	43	1,299	6,253
Infrastructure	<u>18,131</u>	<u>722</u>	<u>-</u>	<u>18,853</u>
Total depreciable capital assets, at cost	<u>174,710</u>	<u>2,255</u>	<u>1,592</u>	<u>175,373</u>
Less accumulated depreciation:				
Building	32,659	3,248	-	35,907
Moveable equipment	3,575	398	280	3,693
Software	-	55	-	55
Fixed equipment	4,871	168	536	4,503
Infrastructure	<u>13,532</u>	<u>797</u>	<u>-</u>	<u>14,329</u>
Total accumulated depreciation	<u>54,637</u>	<u>4,666</u>	<u>816</u>	<u>58,487</u>
Total depreciable capital assets, net of accumulated depreciation	<u>120,073</u>	<u>(2,411)</u>	<u>776</u>	<u>116,886</u>
Non-depreciable capital assets				
Construction in progress	<u>1,093</u>	<u>1,221</u>	<u>1,725</u>	<u>589</u>
Total non-depreciable capital assets	1,093	1,221	1,725	589
Total capital assets, net of accumulated depreciation	<u>\$121,166</u>	<u>\$(1,190)</u>	<u>\$2,501</u>	<u>\$117,475</u>

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Blacksburg, Virginia

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Report on Audits of University-Related Corporations

FINANCE AND AUDIT COMMITTEE

February 5, 2014

In accordance with the resolution passed by the Finance and Audit Committee on April 25, 1985, and as amended on November 13, 1995 and March 31, 2008, each university-related corporation is required to provide the University's President audited annual financial statements, management letters from the external auditors, management's responses thereto, and an annual certification that all procedures outlined in the resolution have been met. These financial statements, management letters, and management responses have been reviewed as of June 30, 2013, and found to meet the standards set forth in the audit resolution.

VIRGINIA TECH CORPORATIONS COMPLIANCE WITH AUDIT RESOLUTION

Corporation	Audited Financial Statement	Management Letter	Response to Management Letter	External Auditor Length of Service	Certification Letter
VT Applied Research Corporation	✓	1	1	2	✓
VT Foundation, Inc.	✓	1	1	2	✓
VT Intellectual Properties, Inc.	✓	1	1	2	✓
VT Services, Inc.	✓	1	1	2	✓

¹ No management recommendations resulted from the audit.

² Corporation using same audit firm as in years past; management team has been rotated within the past five years in accordance with the audit resolution.

Federal Agency Special Purpose Audits and Reviews

FINANCE AND AUDIT COMMITTEE

February 27, 2014

Background

In addition to the annual audits of the university's financial statements and its Intercollegiate Athletics program performed by the Auditor of Public Accounts (APA), Virginia Tech is also subject to special purpose audits or reviews performed by other entities, such as federal agencies sponsoring grants and contracts. Due to the growth in the breadth of the research programs and the dollar volume of activities at Virginia Tech, the university is more likely to now be selected for inclusion in such audits or reviews. At the June 3, September 9, and November 18, 2013 meetings, the university provided reports to the Finance and Audit Committee on the status of the National Science Foundation audit. This report provides an update on the current status of this audit.

National Science Foundation Audit Update

In the Spring of 2013 the Office of the Inspector General (OIG) for the National Science Foundation (NSF) announced it would perform "cost incurred performance audits" of eleven large institutions of higher education which have received significant funding from NSF. Because Virginia Tech currently has 503 active awards totaling \$190.7 million from NSF, it was one of the universities selected for audit.

The OIG has selected Withum Smith and Brown (WSB), a public accounting firm, to perform Virginia Tech's audit. The university has designated the Assistant Vice President for Sponsored Programs Administration and the Assistant Vice President for Finance and University Controller to coordinate interactions with WSB. Since the entrance conference with WSB on April 12, 2013, the following items have occurred:

- WSB has requested and the university has provided numerous data files of transactions from the university's Finance and Human Resources systems for the entire period under audit (January 1, 2010 through December 31, 2012).
- WSB audit managers came to campus from July 31, 2013 through August 2, 2013 to gain an understanding of the university's systems, and its policies and procedures related to the internal controls over the finance and human resources transactions. The Assistant Vice President for Sponsored Programs Administration and the Assistant Vice President for Finance and University

Controller led the discussions with the auditors who seemed experienced and knowledgeable about higher education business processes.

- WSB audit managers and staff returned to campus on August 5, 2013 through August 9, 2013 to test an initial sample of transactions posted to these NSF grants to ensure they are in compliance with federal regulations and are allowable costs. The university provided support for most of these sample transactions while the auditors were on campus. The auditors subsequently asked for additional support or justification for numerous transactions in the initial sample.
- The WSB auditors returned to campus in December 2013 to review a second sample of transactions that were related to faculty, staff, and student salary charges to NSF projects.
- In early February 2014 the university received requests for additional documentation on transactions from both groups of transactions reviewed. The university also received a listing of items that were potential questioned costs (costs charged to projects that the auditors feel may not be in compliance with federal regulations).

Based on a discussion with the WSB auditors on February 11, 2014 and the interactions with the auditors thus far, the audit timetable has been revised as shown below.

Revised Audit Timetable Projection:

- | | |
|--|------------------------|
| a. Selection and review of an initial set of three months data | April – May 2013 |
| b. On-campus visit for initial field work for the initial set of expenditures | July – August 2013 |
| c. Assessment of results of testing for initial sample of transactions, meeting with NSF OIG, selection of additional sample of transactions | August – November 2013 |
| d. Additional on-campus visit to test the second sample of transactions for the three year period | December 2013 |
| e. Creation of initial list of potential questioned costs by the WSB auditors and preparation | February 2014 |

of responses by the university

- | | |
|---|------------------|
| f. Issuance of draft audit report by WSB auditors and creation of the university response | Late Spring 2014 |
| g. Completion and issuance of audit report | Summer 2014 |

Potential Impact of this Type of Audit

It is still too early to determine the final impact of this audit on the university. Based on initial feedback from the WSB auditors, there are concerns about several issues. During early February 2014, the WSB auditors provided multiple spreadsheets listing potential items of questioned costs based on their field work.

The university is in the process of reviewing these items and providing additional information to the auditors. We anticipate that the university will be able to substantiate some of the questioned costs as legitimate charges on NSF grants. The questioned costs generally relate to equipment purchased near the end of NSF projects, salary cost transfers, travel expenditures, visa costs, employee job titles and whether such expenditures benefited the NSF grant that was charged.

In late February, the WSB auditors informed the university about an issue related to charging of salaries for senior personnel to NSF projects. NSF rules preclude charging more than two-ninths of a senior personnel's salary across all active NSF projects for that personnel. The auditors provided a list of questioned costs that did not comply with this specific NSF criteria. Currently, the Office of Sponsored Programs and the Controller's Office personnel are actively working with the WSB auditors to understand the items on the list and to provide clarifications or supporting documents.

The university will continue to provide the requested information and justifications to the WSB auditors for these and any other concerns about the potential questioned costs and continue our efforts to limit the impact of this audit.

Auditor of Public Accounts Statewide Reviews and Special Reports

FINANCE AND AUDIT COMMITTEE

February 25, 2014

Background

In addition to the annual audits of the University's financial statements and its Intercollegiate Athletics program, the Auditor of Public Accounts (APA) has included Virginia Tech along with other agencies in program reviews designed to assess controls on a statewide basis. These special reviews are included as a part of the APA's annual audit plan. Due to the breadth of the programs and the dollar volume of activities at Virginia Tech, the university is often selected for inclusion in the reviews. The following report provides an analysis of the APA's statewide audit activities consistent with the university's planned approach to manage and report on these audit activities.

Recent Audit Activity

Since our last report, the APA has issued one report that reference or might effect Virginia Tech; the APA report is summarized below. The university previously reviewed the APA's statewide reviews and special reports with the Committee in September 2012.

State of Information Security in the Commonwealth of Virginia (APA October 2013)

This is an annual report prepared by the APA that accumulates and analyzes the information security recommendations issued by the APA during audits conducted in the most recent fiscal year. The report's summary listed the six most frequent IT control deficiencies as follows: IT system data backup and restoration, database security, IT disaster recovery plans, IT risk assessments, IT systems and data security, and IT asset management. Virginia Tech was listed in the Appendix to the report which provided detailed assessments for state agencies tested on twenty IT security categories. Virginia Tech was reported as having adequate controls on all areas that the APA tested.

APA 2013 Annual Report – Special Projects 2014 (APA December 2013 & Workplan)

The APA has a total of 15 planned special projects for 2014. A description of the nine planned special projects that might effect Virginia Tech and the current status of the projects are listed below. This is an extraordinary number of special projects for the APA, especially for those effecting higher education.

Detail of APA 2014 Planned Special Projects

Study of the Usage of Sub-recipient Schedule of Expenditure of Federal Awards (SEFA). Determine if state agencies are using sub-recipient audited SEFA's as required in their oversight of federal funds by reviewing and comparing sub-recipient SEFA's to the state agency's disbursements and investigating any differences and making adjustments as needed.

In January 2014 the university provided information to the APA about all disbursements to sub-recipients from federal grants and contracts for fiscal year 2012. The APA has not yet performed any testing of the data provided.

Progress Report on Selected Systems Development Projects in the Commonwealth. Provide a periodic summary report of ongoing monitoring activities over the systems development process for major systems to determine if the projects are on schedule, on budget, and provide required functionality. This report will include systems development projects for the various departments, agencies, and higher education institutions.

In early February 2014 the university provided a list of all Information Technology system projects (current and planned) with budgets in excess of \$250,000. The APA has not requested additional information or begun testing for this project.

Higher Education Alternative Financing Study. Identify and evaluate the various alternative financing arrangements currently utilized by colleges and universities to fund projects across the Commonwealth. Report on financing arrangements other than projects utilizing state bond programs to include agreements with foundations, and other related entities.

In early February 2014 the university responded to an APA survey requesting information about alternative financing activities. The university's response indicated that we had limited use of such activities because generally traditional financing, such as issuing bonds or financing projects with internal resources, was the most economical alternative.

Statewide Review of Teleworking Data Risks. Consider the use of non-Commonwealth issued devices and related teleworking risks and security around employees accessing agency networks from the outside. Evaluate current teleworking policies and procedures for all Commonwealth agencies compared to best practices. Determine if these policies and procedures have been implemented and are being followed.

Statewide Review of Mobile Devices. Perform a review of mobile devices (cellphones, tablets, and laptops) and the plans they use, including voice, text, and data, and the related costs. Determine whether VITA has implemented adequate guidance over the management of these devices, and whether agencies are following the guidance and using the most cost effective plans. Determine whether there are any other devices, such as pagers, that are obsolete but are still in use.

Statewide Review of Travel. Review and analyze travel activities and administration within the Commonwealth, including a review of existing travel regulations, expenses, and management functions. Consider the need for travel and the availability of alternative meeting tools to potentially reduce costs. Consider whether the Commonwealth could realize efficiencies and better ensure compliance with state travel regulations by having one central entity make travel arrangements.

Comparative Report for Higher Education. Provide financial comparison and analysis of the various public institutions of higher education in Virginia, considering the size and type of institution, and utilizing techniques such as ratio analysis to further analyze and compare financial information. Transition this information into an annual report to aid decision makers and improve transparency and comparability for citizen-users of financial information.

Security of Internet Facing Websites. Determine whether agencies' internet facing websites are adequately protected to ensure data confidentiality, integrity, and availability. Focus on web sites that have access to confidential (PII, HIPAA, FERPA, etc.) and mission critical data. Review the Commonwealth's security standard and whether it adequately addresses industry best practices for web site security.

Review of Capital Outlay Funding and Cash Flow Processes. Determine the status of the Department of General Services' (General Services) implementation of a capital project IT solution required in the 2008 Capital Outlay Bond Act. Review the effectiveness of the Commonwealth's process to determine which projects to move to the construction phase in the capital outlay process and the feasibility of a statewide prioritization system. Recommend ways to improve Department of General Services' process to develop construction draw schedules, and communicate that information to the Department of Treasury to determine bond issuance timing.

Presentation of the University's Annual Financial Report

FINANCE AND AUDIT COMMITTEE

January 30, 2014

Fiscal year 2013 represented yet another challenging period to continue the advancement of Virginia Tech. In spite of the current economic environment, the university continues to employ cost containment and income enhancement techniques which have enabled the university to successfully grow the programs of core missions. The university's overall financial position remains strong. Despite the challenges, we had a successful year on several fronts. While continuing to move forward and expand our academic programs, we have managed operations with structurally balanced budgets, and realized growth in unrestricted net assets and capital assets.

Summary of Audit Results

- Unmodified audit opinion (*Previously called an Unqualified audit opinion*)
- No material weakness in internal controls
- No instances of noncompliance or other matters required to be reported under Government Auditing Standards
- No written audit recommendations involving internal control

Assets, Liabilities and Net Position at June 30, 2013 & 2012

(all dollars in millions)

	2013	2012	Change	
			Amount	Percent
Current assets	\$ 404.9	\$ 388.9	\$ 16.0	4.1%
Noncurrent cash and cash equivalents*	69.2	141.3	(72.1)	(51.0)%
Capital assets, net	1,519.0	1,339.5	179.5	13.4%
Other assets	218.0	176.3	41.7	23.7%
Total assets	2,211.1	2,046.0	165.1	8.1%
Current liabilities	238.1	246.1	(8.0)	(3.3)%
Noncurrent liabilities	537.8	511.0	26.8	5.2%
Total liabilities	775.9	757.1	18.8	2.5%
Invested in capital assets, net	994.3	867.3	127.0	14.6%
Restricted	158.3	156.0	2.3	1.5%
Unrestricted	282.6	265.6	17.0	6.4%
Total net position	\$ 1,435.2	\$ 1,288.9	\$ 146.3	11.4%

The balance sheet shows positive results for fiscal year 2013 with the key indicators as follows:

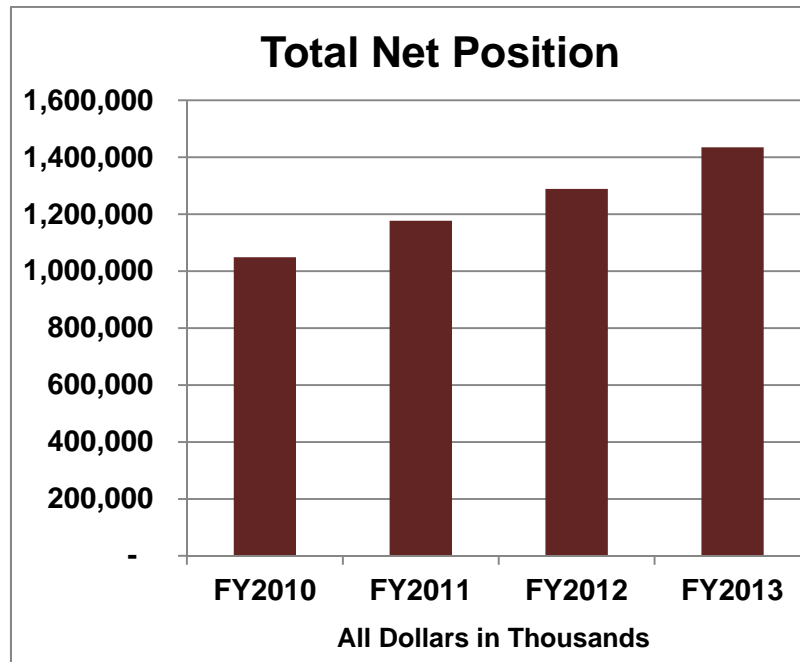
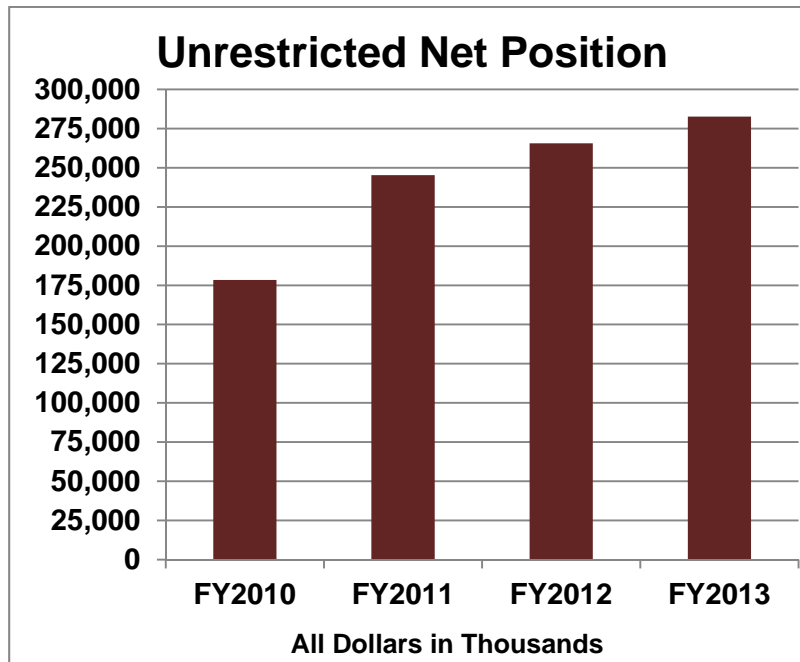
- Assets increased more than liabilities and Net Position increased by \$146.3 million.
- The largest increase (over \$179 million) occurred in Capital Assets.
- Total liabilities grew due to increased long term debt issuances.

* A reduction of in the Virginia State Non-Arbitrage Program (SNAP) (\$58.1 million) accounts for majority of the decrease in noncurrent cash and cash equivalents. Bond proceeds from prior years were spent to complete capital projects in the current year.

Improvement Trends in Net Position

(all dollars in thousands)

	<u>FY2010</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>
Capital Assets, Net of Related Debt	\$ 734,875	\$ 794,583	\$ 867,314	\$ 994,272
Restricted, Nonexpendable	363	364	364	357
Restricted, Expendable				
Capital projects	14,074	12,837	20,302	11,024
Other	120,876	123,801	135,315	146,873
Unrestricted	178,471	245,316	265,648	282,649
Total Net Position	\$ 1,048,659	\$ 1,176,901	\$ 1,288,943	\$ 1,435,175



Note: There has been a \$104.2million (58 percent) increase in Unrestricted Net Position since fiscal year 2010.

Ongoing Investments in Capital Assets
Summary Changes in Capital Assets for FY2013
(all dollars in millions)

	Beginning Balance	Additions	Retirements	Ending Balance
Depreciable capital assets				
Buildings	\$ 1,168	\$ 206	\$ 6	\$ 1,368
Moveable equipment	430	43	24	449
Software and intangible assets	9	1	0	10
Fixed equipment	104	1	1	104
Infrastructure	119	1	0	120
Library books	76	1	1	76
Total depreciable capital assets, at cost	1,906	253	32	2,127
Less accumulated depreciation				
Total accumulated depreciation	873	79	26	926
Total depreciable capital assets, net	1,033	174	6	1,201
Nondepreciable capital assets				
Land	46	0	0	46
Livestock	1	0	0	1
Construction in progress	257	167	162	262
Equipment in process	3	7	3	7
Software in development	0	2	0	2
Total nondepreciable capital assets	307	176	165	318
Total capital assets, net	\$ 1,340	\$ 350	\$ 171	\$ 1,519

Major buildings additions completed & capitalized fiscal year 2013: Ambler Johnston Hall renovation (\$53.8 million), the North End Center building and parking structure capital leases (\$43.9 million), Lavery Hall (\$41.3 million), the Chiller Plant facility (\$17.7 million), VT-Carilion Research Institute Third Floor upfit (\$12.3 million), Veterinary Medicine Instructional Addition (\$11.6 million), Southwest Campus Heating & Cooling facility (\$6.7million) and construction of the first building in the Oak Lane Phase IV housing community (\$4.6 million).

Major Projects contributing to the “Construction in Progress” balance: Moss Arts Center (\$82.2 million), the Signature Engineering building (\$55.9 million), the Human & Agriculture Biosciences Building I (\$36.6 million) and the Davidson Hall renovation (\$19.4 million).

Summary of Revenues, Expenses, and Changes in Net Position for FY2014

(all dollars in millions)

	<u>2013</u>	<u>2012</u>	<u>Change</u>	
			<u>Amount</u>	<u>Percent</u>
Operating revenues	\$ 900.0	\$ 832.4	\$ 67.6	8.1%
Operating expenses	<u>1,155.5</u>	<u>1,076.3</u>	79.2	7.4%
Operating loss	(255.5)	(243.9)	-11.6	4.8%
State appropriations	232.4	219.4	13.0	5.9%
Other non-operating revenues and expenses	<u>63.6</u>	<u>59.9</u>	3.7	6.2%
Non-operating income	296.0	279.3	16.7	6.0%
Income before other revenues & expenses	40.5	35.4	5.1	14.4%
Other revenues, expenses, gains or losses	<u>105.8</u>	<u>76.6</u>	29.2	38.1%
Increase in net position	146.3	112.0	34.3	30.6%
Net position - beginning of year	<u>1,288.9</u>	<u>1,176.9</u>	112.0	9.5%
Net position - end of year	\$ 1,435.2	\$ 1,288.9	\$ 146.3	11.4%

Note: Under GASB reporting, public universities will always show an operating loss because state appropriations, gifts and investment income are all considered non-operating revenues.

Operating revenues increased by 8.1 percent from the prior fiscal year. This growth came primarily from two categories: Student tuition & fees and Grants and contracts.

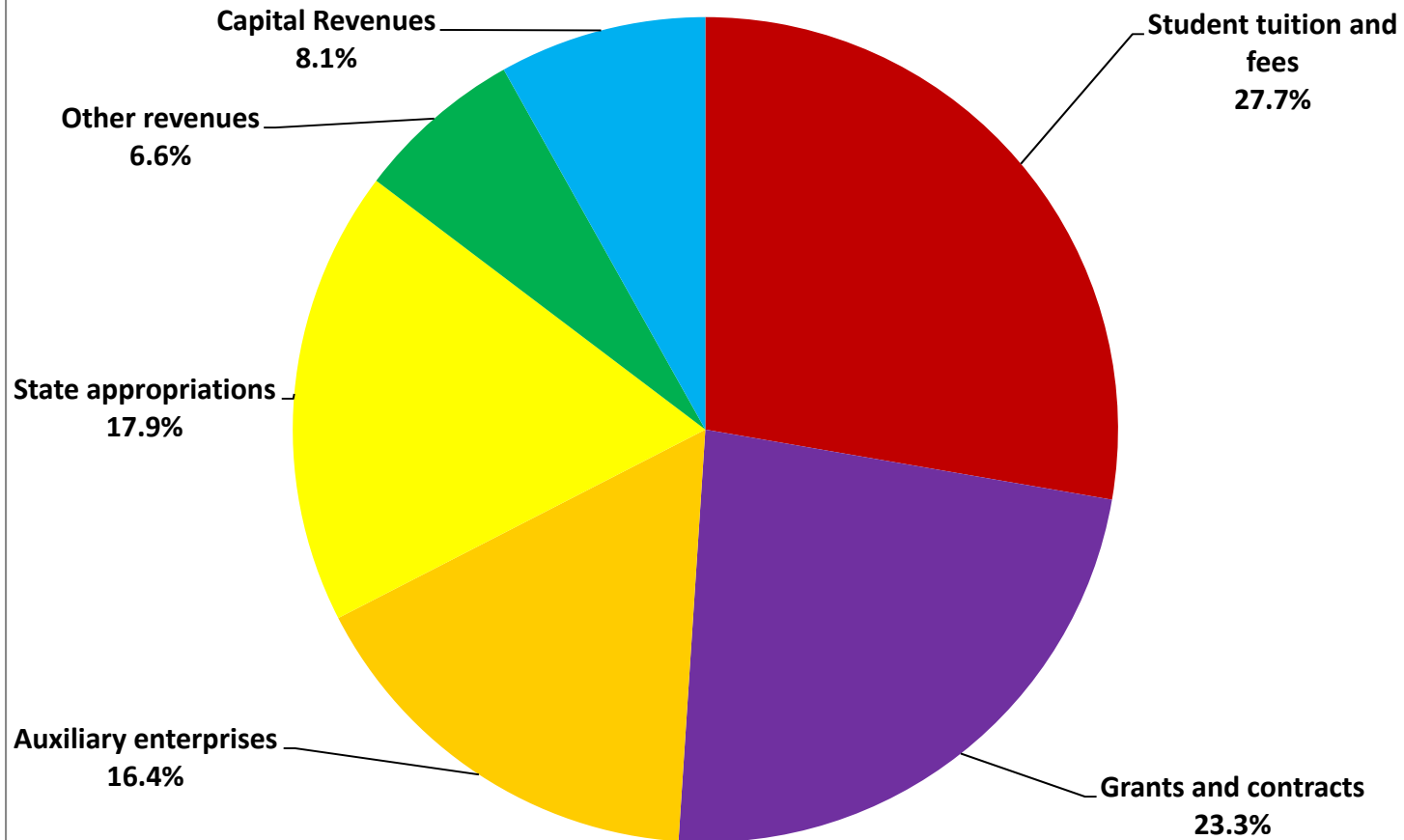
The majority of the \$29.2 million increase in the "Other revenues, expenses, gains or losses" category can be accounted for by the ongoing construction of capital projects funded from the 21st Century bond program \$38.5 million and which were partially offset by reductions in capital appropriations (\$3.2 million) and the Central Maintenance Reserve program (\$4.3 million).

Increase (Decrease) in Revenues for Fiscal Year 2013
(all dollars in millions)

	2013	2012	Change	
			Amount	Percent
Operating revenues				
Student tuition and fees, net	\$ 360.8	\$ 337.5	\$ 23.3	6.9%
Grants and contracts	303.6	273.1	30.5	11.2%
Auxiliary enterprises	213.7	201.8	11.9	5.9%
Other operating revenue	21.9	20.0	1.9	9.5%
Total operating revenues	900.0	832.4	67.6	8.1%
Non-operating activity				
State appropriations	232.4	219.4	13.0	5.9%
Other non-operating revenues	63.6	59.9	3.7	6.2%
Total non-operating revenues	296.0	279.3	16.7	6.0%
Other revenues				
Capital grants and gifts	109.0	77.9	31.1	39.9%
Loss on disposal of capital assets	(3.2)	(1.3)	(1.9)	146.2%
Total capital revenues, gains	105.8	76.6	29.2	38.1%
Total revenues	\$ 1,301.8	\$ 1,188.3	\$113.5	9.6%

Most of the 2013 Increase in Non-operating revenues of 16.7 million was related to the increase in state appropriations \$13.0 million and higher returns on investments \$6.5 million. These gains were partially offset by a reduction in federal fiscal stabilization funding (\$3.5 million), reflecting the elimination of the program in fiscal year 2012.

Revenue by Source for Fiscal Year 2013



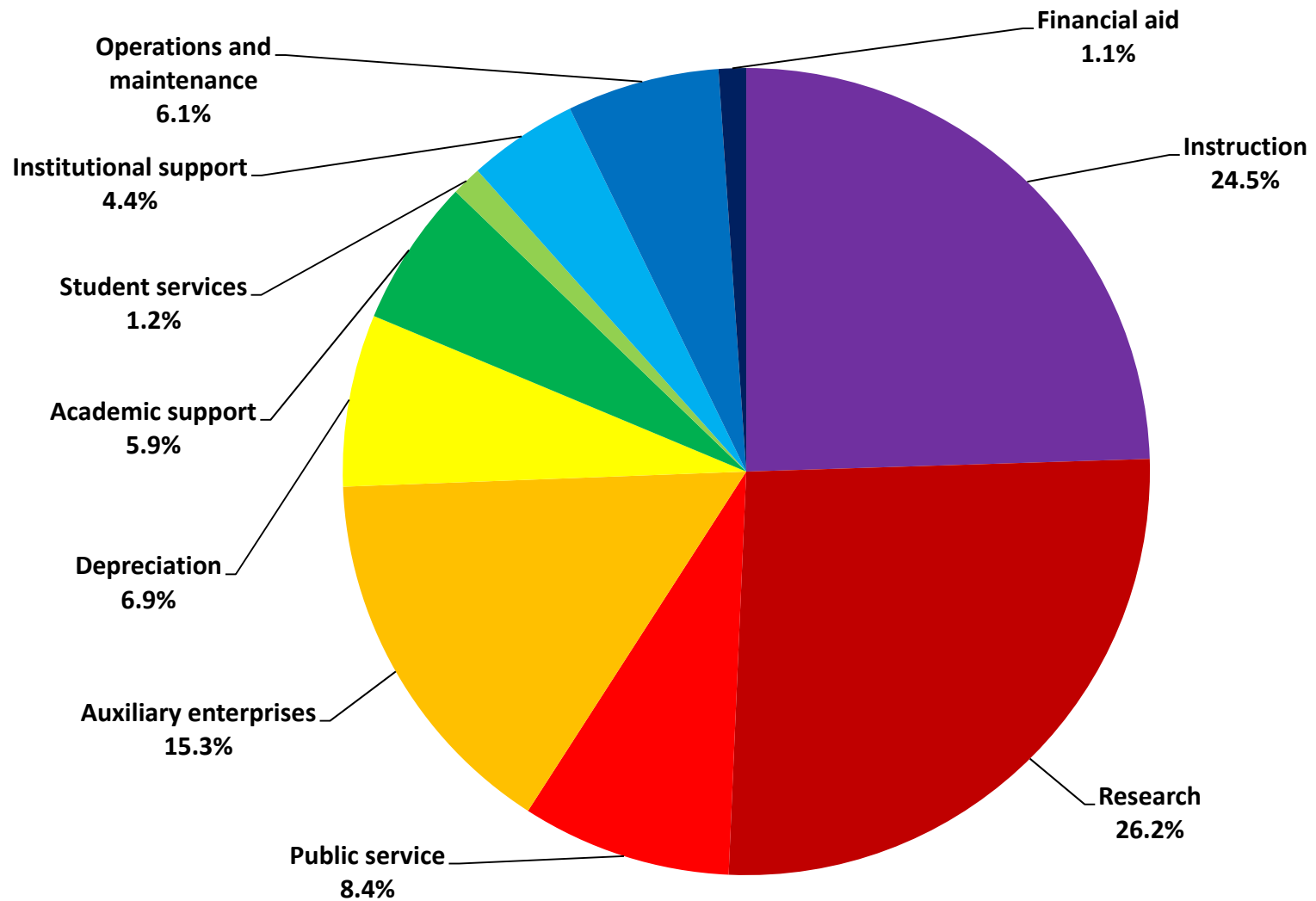
Increase (Decrease) in Operating Expenses for Fiscal Year 2013

(all dollars in millions)

	2013	2012	Change	
			Amount	Percent
Instruction	\$ 283.5	\$ 260.1	\$ 23.4	9.0%
Research	302.1	280.4	21.7	7.7%
Public service	97.3	85.8	11.5	13.4%
Auxiliary enterprises	176.3	159.6	16.7	10.5%
Subtotal	859.2	785.9	73.3	9.3%
<u>Support, maintenance, and other expenses</u>				
Academic support	68.5	65.0	3.5	5.4%
Student services	14.2	13.3	0.9	6.8%
Institutional support	50.7	52.5	(1.8)	(3.4)%
Operations and maintenance	70.8	69.3	1.5	2.2%
Depreciation and amortization expense	79.8	77.2	2.6	3.4%
Student financial assistance, loan admin. fees and collection costs	12.3	13.1	(0.8)	(6.1)%
Total support, maint, and other expenses	296.3	290.4	5.9	2.0%
Total operating expenses	\$1,155.5	\$1,076.3	\$ 79.2	7.4%

The largest growth in operating expenses was in the functional categories of instruction (\$23.4 million), research (\$21.7 million), auxiliary enterprises (\$16.7 million) and public service (\$11.5 million). Salaries, wages and fringe benefits accounted for the majority of the expense increase in these categories.

2013 Operating Expenses



Expense by Natural Classification

(all dollars in millions)

	2013	2012	Change	
			Amount	Percent
Compensation and benefits	\$ 713.0	\$ 661.5	51.5	7.8%
Contractual services	89.6	80.8	8.8	10.9%
Supplies and materials	103.0	98.9	4.1	4.1%
Travel	40.3	39.2	1.1	2.8%
Other operating expenses	51.0	51.6	(0.6)	(1.2)%
Scholarships and fellowships (1)	32.8	32.5	0.3	0.9%
Sponsored program subcontracts	46.0	34.6	11.4	32.9%
Depreciation and amortization	79.8	77.2	2.6	3.4%
Total operating expenses	\$ 1,155.5	\$ 1,076.3	79.2	7.4%

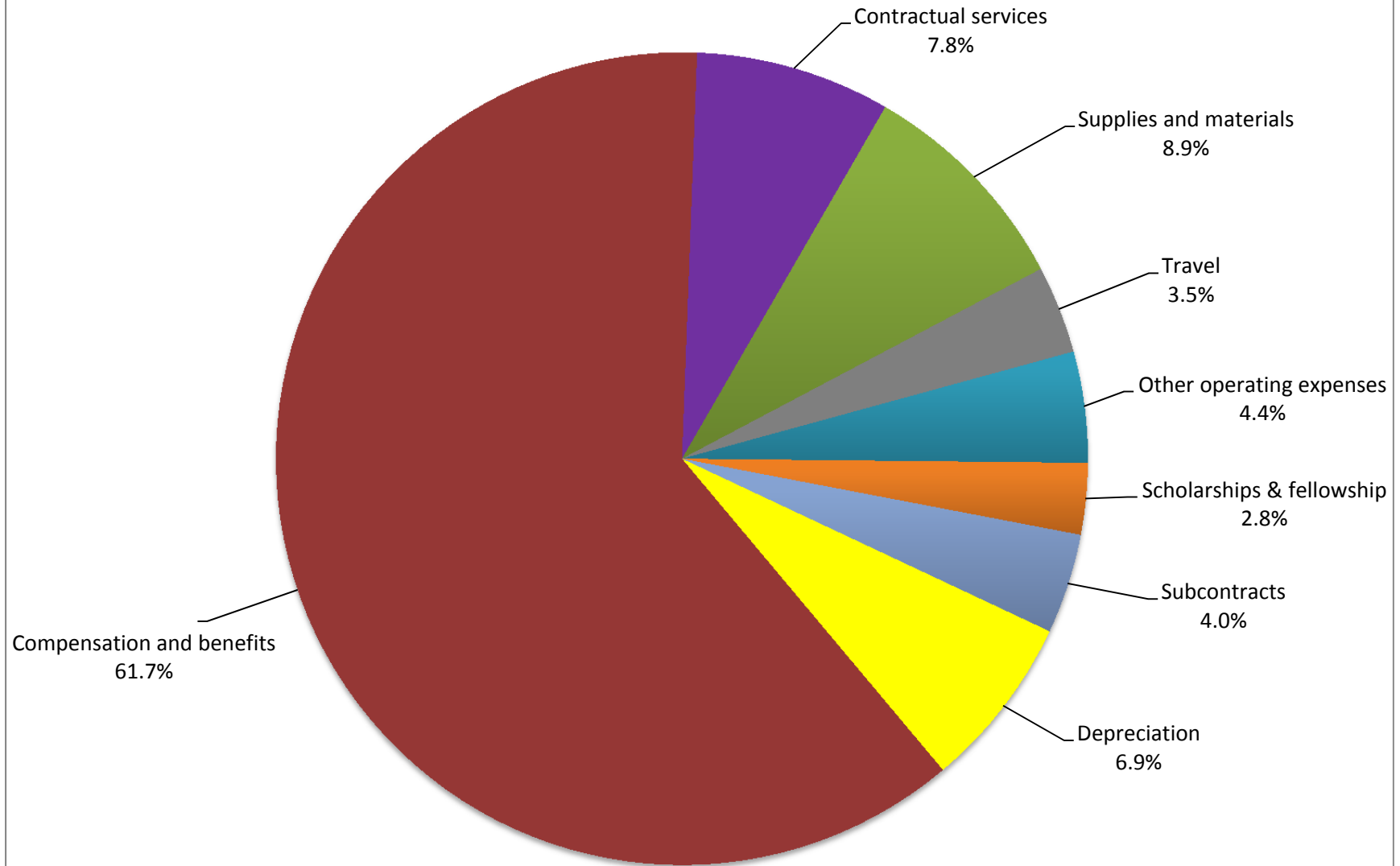
Compensation and benefits, comprises \$713.0 million or 61.7% of the university's total operating expenses. This category increased by \$51.5 million (7.8%) from the previous year. Factors contributing to the increase in compensation include: one-time bonuses (\$13.0 million), the in-band adjustment process and growth in teaching and research faculty positions (\$7.6 million), and additional graduate teaching and research personnel (\$3.8 million). Factors contributing to the increase in benefits include: medical insurance (\$9.1 million), retirement expense (\$7.7 million), FICA (\$1.8 million), group life insurance (\$1.7 million), and retiree health insurance (\$1.1 million).

A second category with a significant increase over the prior year was sponsored programs subcontracts (\$11.4 million). This was attributed primarily to the growth in federal grants and contracts.

The last category with significant growth was contractual services (\$8.8 million). The majority of the growth in this category was in the operations and maintenance area (\$5.2 million) resulting from increases in contracting out for maintenance, repair and renovation activity.

(1) Under GASB reporting, this number includes only part of the total financial aid provided. The amount above is net of a \$107.3 million allowance required to adjust tuition and fees revenues and financial aid expense for fee waivers, tuition remission and other forms of financial aid where revenues are not received from external parties. **Internally funded financial aid has increased as the university has implemented programs to ensure affordability and access. The increase in financial aid was designed to mitigate the impact of increases in tuition and fees as a result of ongoing reductions in state appropriations.**

Expenses by Natural Classifications for Fiscal Year 2013



Changes in Long-term Debt Payable Activity

as of June 30, 2013

(all dollars in millions)

	<u>Beginning Balance</u>	<u>Additions</u>	<u>Retirements</u>	<u>Ending Balance</u>	<u>Current Portion</u>
Bonds Payable					
Section 9(c) general obligations	\$ 178.6	\$ 12.2	\$21.5	\$ 169.3	\$ 7.9
Section 9(d) revenue bonds	58.3	-	40.2	18.1	6.1
Notes Payable	238.7	45.9	10.2	274.4	11.5
Capital Lease Obligations	25.2	43.9	2.7	66.4	2.5
Installment purchase obligations	0.1		-	0.1	-
Total Long-term debt payable	<u>\$ 500.9</u>	<u>102.0</u>	<u>74.6</u>	<u>\$ 528.3</u>	<u>\$28.0</u>
Current year debt defeasance		<u>(46.6)</u>	<u>(46.6)</u>		
Total additions/retirements, net of current year defeasance		<u>\$ 55.4</u>	<u>\$28.0</u>		

The majority of the net increase in noncurrent liabilities resulted from the following major debt issuances (excluding defeasances): Veterinary Medicine Instructional addition (\$9.8 million) and the capital lease obligation recorded for the North End Center building and parking structure (\$43.6 million). In addition, there the majority of the defeasance was due to refinancing of debt for Athletics (\$34.5 million).

The increase in noncurrent liabilities was partially offset by the reclassification of long-term debt from the noncurrent to current liabilities category.

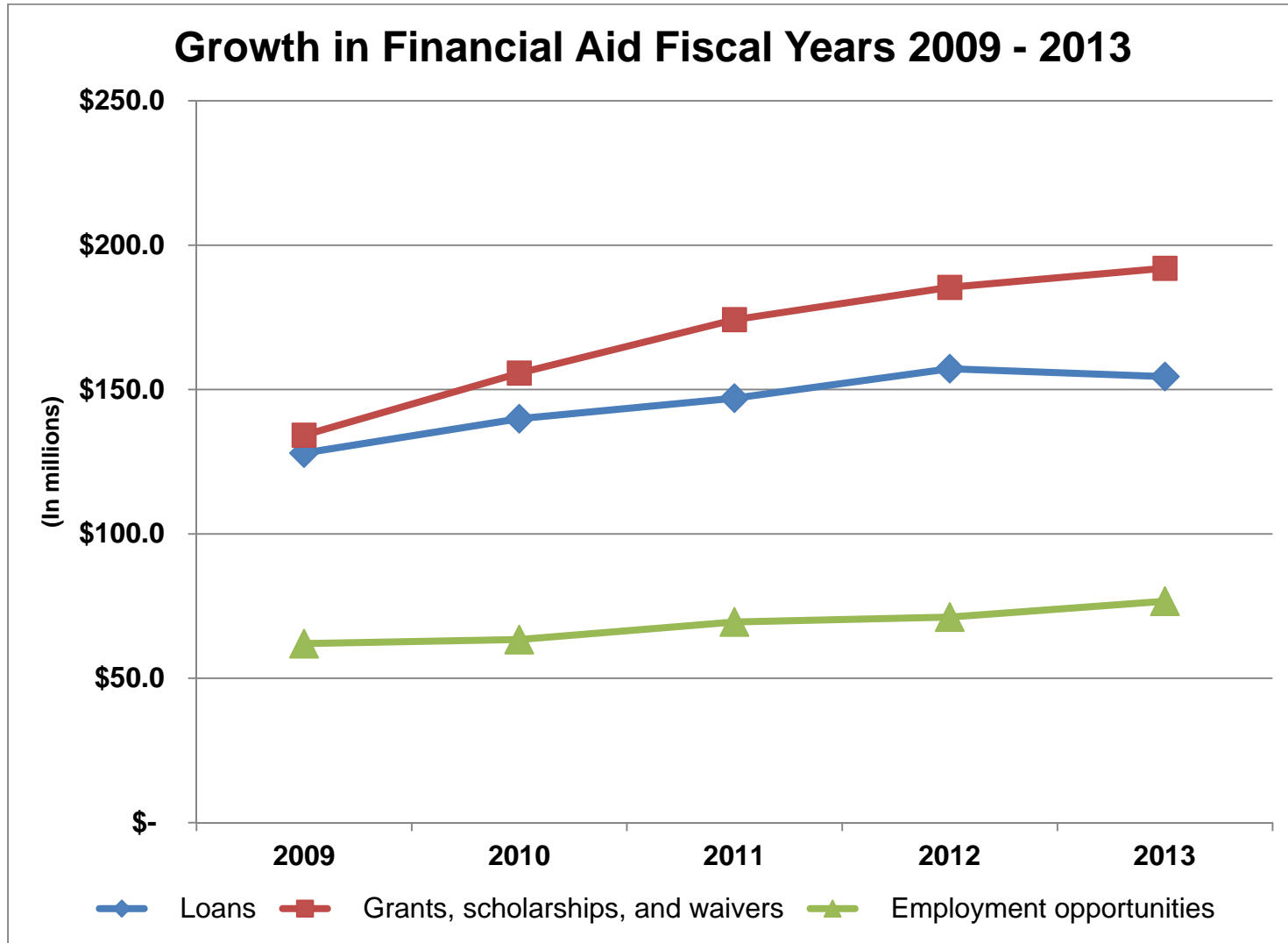
Growth in Externally Sponsored Programs

	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>
Number of Awards	2,384	2,516	2,400	2,589	2,272
Value of Awards <i>(in millions)</i>	\$ 232.3	\$ 312.4	\$ 274.0	\$ 294.1	\$ 271.1
Research Expenditures Reported to NSF	\$ 396.7	\$ 398.2	\$ 450.1	\$ 454.4	\$ 496.1
NSF Rank	44	47	41	40	N/A

Growth in Financial Aid

	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>
<u>Number of Students</u>					
Loans	12,085	12,896	13,133	13,081	12,506
Grants, scholarships, and waivers	18,406	27,134	27,469	19,535	19,762
Employment opportunities	8,734	8,514	9,007	9,331	9,935
<u>Total Amount (in millions)</u>					
Loans	\$ 128.0	\$ 139.9	\$ 147.0	\$ 157.2	\$ 154.5
*Grants, scholarships, and waivers	134.2	155.7	174.2	185.4	192.0
Employment opportunities	62.0	63.4	69.5	71.2	76.7
Total Financial Aid	\$ 324.2	\$ 359.0	\$ 390.7	\$ 413.8	\$ 423.2

*Grants, scholarships, and waivers for fiscal year 2010 and fiscal year 2011 include undergraduate Virginia residents who received ARRA tuition mitigation grants.



- **VirginiaTech Students have lower debt than the national average.**
 - 54 percent of the undergraduate Virginia Tech Class of 2012 borrowed an average of \$25,579, while nationally 71 percent of the students who graduated from all four year colleges in 2012 borrowed an average of \$29,400 in student loans.

Summary of Composition of Investments at June 30, 2013

(all dollars in millions)

Description and Credit Rating	Cash Equivalents		Short-Term Investments		Long-Term Investments		Total
		<90 day		>90 days <1 year		>1 year	
U.S. Treasury Securities (N/A)	\$	30.00			\$	21.20	\$ 51.2
Debt Securities (A1 to A3)						60.2	60.2
Repurchase Agreements (N/A)		61.2					61.2
Federal Agency Securities (AAA to Aaa)		207.3				42.2	249.5
Snap Funds (AAAm)		15.6					15.6
Investments with VTF (N/A)		1.4				59.3	60.7
Other Investments (AAA to BBB+)		1.5		3.0			4.5
June 30, 2013 Balance	\$	317.0	\$	3.0	\$	182.9	\$ 502.9
June 30, 2012 Balance		387.6		2.4		152.4	542.4
Change in Investment Balances	\$	(70.6)	\$	0.6	\$	30.5	\$ (39.5)

- SNAP funds are non-arbitrage safe harbor investments for unspent tax exempt bond proceeds.
- A reduction in SNAP funds (\$58.1 million) is responsible for the majority of the decrease in total investments.

Conclusion:

Despite significant fiscal challenges, the university continues to make progress on several fronts including the following:

- Continued investment in facilities supporting the university's strategic plan with the prudent use of debt financing.
- Continued growth in liquidity / unrestricted net position to adequately support the growth in debt since FY 2002.
- Strong student demand – the university continues to have growth in applications and the successive improvements of overall quality of each entering class.
- Moderation in tuition rate increases has enabled the university to maintain its competitive advantage over peer institutions. With a total cost (including room and board) of \$18,177 per year for Virginia undergraduates, Virginia Tech ranked 20th out of a group of 24 SCHEV public peer institutions in 2012-13.
- Virginia Tech's 2012 NSF research ranking reached 40th in 2012, the university's highest rank to date.

Update on Joint Legislative Audit and Review Commission's Study on Higher Education Cost Efficiency

FINANCE AND AUDIT COMMITTEE

February 19, 2014

Background

The 2012 General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to conduct a study on cost efficiency of public higher education institutions in Virginia and to identify opportunities to reduce the cost of public higher education in Virginia. The House Joint resolution that directs JLARC to conduct the study identified 14 areas to consider including both academic and non-academic factors that affect the cost of higher education operations. The study is to be conducted over a period of two years and is expected to be completed by November 30, 2014. According to the 2013 JLARC Workplan, the Commission has divided the study into the following broad categories and plans to issue separate reports on each topic by the given dates:

1. *Trends in Higher Education Funding, Enrollment, and Student Costs:* The report summarizes 10 and 20 year trends in the areas of enrollment, tuition and fees, housing, and dining charges, the relationship between average income and higher education costs, student borrowing and other forms of financial aid, public higher education revenue streams, and public higher education spending. June 10, 2013
(Issued)
2. *Review of Auxiliary Enterprises and Cost of Student Life:* This review addresses the efficiency of auxiliary enterprises that are funded through student fees including student housing, student dining, intercollegiate athletics, and campus recreation. September 9, 2013
(Issued)
3. *Review of Academic Spending and Workload:* The review addresses:
i) how the different types of academic programs offered affect spending,
ii) the key drivers of faculty compensation,
iii) major faculty activities and level of faculty productivity, including the role of technology,
iv) the financial costs of research and types of benefits that stem from research, and
v) utilization and spending on instructional and research space. December 9, 2013
(Issued)
4. *Review of Administrative Efficiency:* The objective of this review is to study administrative efficiency including administrative staffing, information technology, and procurement. 2014

5. *Strategies and Practices to Facilitate Efficient and Effective Public Higher Education in Virginia*: The primary objective of this review will be to summarize and synthesize key findings from prior JLARC reviews on higher education, and to identify strategies and practices used by Virginia institutions, institutions in other states, other state oversight organizations, and legislatures that merit consideration.

2014

Status of the JLARC Review

JLARC has issued three of the five scheduled reports and is set to commence work on the fourth and fifth reports. The university has previously provided updates to the Board from the previous two reports. This report provides key findings and recommendations from the third report. The Vice President for Finance and CFO continues to serve as the point of contact for coordination of the review with appropriate university personnel. Due to the comprehensive nature of the review, numerous departments within the university have been involved in responding to the detailed information requests and follow-up questions during the course of the study. The university continues to actively review and monitor the reports and information requests to understand what these reviews may hold for the university and higher education, in general.

Report on Academic Spending and Workload

JLARC issued its third report – *Review of Academic Spending and Workload at Virginia's Public Higher Education Institutions* in its higher education study series on December 9, 2013. This 172 page report reviewed the topics of instructional spending, faculty compensation, faculty workload, research spending, instructional technology, and research and instructional facilities. The key findings from the report for each of the area, including JLARC's six recommendations are summarized below:

Instructional Spending

- At \$2.1 billion, instructional and research spending constitutes 66 percent of Educational and General (E&G) spending at Virginia research institutions in 2010-11. Instructional spending was 41 percent of E&G spending and research was approximately 25 percent.
 - *At VT, instruction and research spending constitutes 59.4 percent of E&G spending.*
- Instructional spending per FTE student in 2010-11 is at or below the national average for public institutions at most Virginia institutions. VT instructional spending per FTE is 20 percent below the national average for public institutions.
- Although the State provides significant funding for instruction through the E&G budget, State funding guidelines and policies for higher education funding are largely unmet. These guidelines include base budget adequacy funding; state's cost sharing goal of 67

percent of an institution's cost of education for an in-state student; and the faculty salary goal of 60th percentile of each institution's peer group.

- *For FY 14, VT received 38.2 percent in funding for an in-state student compared to the 67 percent State cost share goal.*
 - *As calculated by SCHEV, VT has a base budget adequacy shortfall of \$18.7 million for FY 2013.*
 - *For FY 2012, faculty salaries at VT are 28th percentile of SCHEV peers compared to the goal of 60th percentile.*
- Institutional spending on faculty salaries and benefits represent the largest instructional expenditure for Virginia institutions in FY 2012. Institutional spending on faculty was largely driven by growth in faculty FTE to keep pace with student enrollment growth and to maintain consistent faculty workload.
- Instructional costs for STEM-H (science, technology, engineering, math, and health) disciplines are higher than other disciplines due to greater personnel costs for STEM faculty, higher non-personnel costs, and specialized accreditation. The State's continued emphasis on growth in these disciplines will likely continue to increase the cost of instruction.

Faculty Compensation

- Faculty salaries at most institutions are below the State policy goal and Carnegie Classification averages. For FY 2011-12, 14 Virginia institutions fell below the 60th percentile of their peers; nine by more than \$10,000 or more.
- *For the same period, VT is approximately \$10,700 below the average*
- Spending on faculty salaries and benefits has increased, primarily because schools have hired more faculty to keep pace with rising student enrollment. The process used to assess faculty salaries is outdated and imprecise.
- Potential improvements to the State process for comparing salaries:
- Use current, actual salary data rather than appropriated salaries.
 - Include private funding sources, such as endowments, to improve comparability to peer institutions.
 - Benchmark salaries at the discipline level to provide a more precise comparison than the current approach of comparing institution-wide salaries
 - Improve the transparency of the peer selection process
 - *Inclusion of private funding sources in the calculation of appropriated salary average is in conflict with the Code of Virginia and is not congruent with the state's responsibility of funding the E&G program. Further, the inclusion of external funding in the appropriated salary average erodes the university's ability to reward excellence and undermines future philanthropy efforts.*

Faculty Compensation Recommendations:

- 1. The General Assembly may wish to consider regularly rebasing appropriated and actual average faculty salaries.**
- 2. The State Council of Higher Education for Virginia should benchmark average faculty salaries at the discipline level and improve the transparency of the peer group process by reporting the outcomes of its statistical model, as well as the rationale for making modifications to the peer groups selected through the model.**

Faculty Workload

- Tenure and tenure-track faculty are teaching marginally less than in previous years. Teaching loads are generally consistent with national averages.
 - At VT, average teaching loads per faculty FTE in FY 2010 is 10 percent more than FY 2004.
- Tenured and tenure-track faculty in Virginia now spend less time teaching and more time conducting research.
- Some schools have increased their use of contingent faculty (non-tenure track and adjunct instructors), but Virginia's colleges and universities use them less than similar schools around the country.

Faculty Workload Recommendation:

- 3. Boards of Visitors should consider requiring their institutions to conduct and participate in national faculty teaching load assessments that facilitate benchmarking average faculty teaching loads against similar institutions. The assessments should measure national average teaching loads by discipline and faculty type.**

Research Spending

- Virginia ranked 37th among States in academic research expenditures per capita. In FY 2011, the national average for higher education research spending per capita was \$207 compared to \$159 in Virginia.
- Research spending grew by 62 percent or \$1.2 billion from FY 2003 - FY 2011.
 - *AT VT, research spending grew by 80.6 percent or \$450.1 million. VT's research expenditures reflects, in part, its status as a land-grant university*
 - *For FY 2012, VT is ranked 40th in the nation in NSF research expenditures, the highest ranking of any Virginia institution.*
- About 80 percent of total research spending at Virginia's six research schools is funded through external sources, including federal and state government.

- Research institutions funded nearly \$300 million (FY 2011) in research cost, which is covered through a variety of sources – including tuition and fees. Research costs include cost sharing, unrecovered overhead, and institutional investments in research.
- Undergraduate and graduate students benefit from research experience. Additionally, research increases employment, economic activity, and institutional prestige.

Research Spending Recommendation:

- 4. The General Assembly may wish to consider amending the Code of Virginia to direct the State Council of Higher Education for Virginia to track State funding for higher education research from all sources and develop a process for institutions to report on the progress of State-supported research projects.**

Instructional Technology

- Virginia institutions use instructional technology less than other States in the region:
 - 4 percent of undergraduate student credit hours in Virginia were delivered electronically; 2nd lowest among southern/mid-Atlantic region.
 - State provided over \$6 million in FY 2013 to support instructional technology.
- Impact of instructional technology on costs and learning varies. The State could facilitate increased collaboration on instructional technology.

Instructional Technology Recommendation:

- 5. The General Assembly may wish to consider:**
 - a. appropriating funding for the State Council of Higher Education for Virginia to coordinate a committee of institutional representatives on instructional technology.**
 - b. the committee should identify instructional technology initiatives and best practices for lowering institutions' instructional expenditures per student while maintaining or enhancing student learning.**

Instructional and Research Space

- Research institutions increased their instructional square feet per student by 4 percent from FY 2005-FY2012.
- Research institutions increased research square footage on average by 17 percent from FY 2005-FY 2012
 - *During the review period, the university:*
 - *spent approximately \$365 million on instruction and research space,*
 - *held one of the highest instruction space productivity rates,*
 - *held one of the highest research space productivity rates,*
 - *became significantly more productive per square foot of research, and*
 - *held O&M expenditure rate growth steady.*

- The State's capital planning process has not been consistently followed and some approval decisions were not consistent with SCHEV prioritization of projects.
 - *VT consistently follows the capital planning process as established in the Code of Virginia and the Appropriation Act.*

Instructional and Research Space Recommendation:

- 6. The State Council of Higher Education for Virginia should convene a working group of institutional staff to develop instructional and research space guidelines that adequately measure current use of space and plans for future use of space at Virginia's public higher education institutions.**

Next Steps

JLARC has started preliminary work on the next higher education study which will address administrative staffing and costs, use of technology for administrative functions, cooperative procurement, and outsourcing. The university was contacted by JLARC in early January to commence the study; however, no activity has occurred since then. The university will continue to provide full support to JLARC in the study and will continue to provide periodic updates to the Board as additional information is available and reports are released.



Update on JLARC Study on Higher Education Cost Efficiency

M. Dwight Shelton, Jr.

Vice President for Finance and CFO

March 24, 2014

JLARC Study: Overview

The 2012 General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to:

- conduct a study on **cost efficiency** of the Virginia public higher education institutions
- identify opportunities to **reduce the cost of public higher education in Virginia.**

JLARC Study: Reports

	Report	Issue Date
1.	Trends in Higher Education Funding, Enrollment, and Student Costs	June 10, 2013 (Issued)
2.	Review of Non-Academic Services and Costs	September 9, 2013 (Issued)
3.	Review of Academic Spending and Workload	December 9, 2013 (Issued)
4.	Review of Administrative Efficiency	2014
5.	Strategies and Practices to Facilitate Efficient and Effective Public Higher Education in Virginia	2014

JLARC Review of Academic Spending and Workload

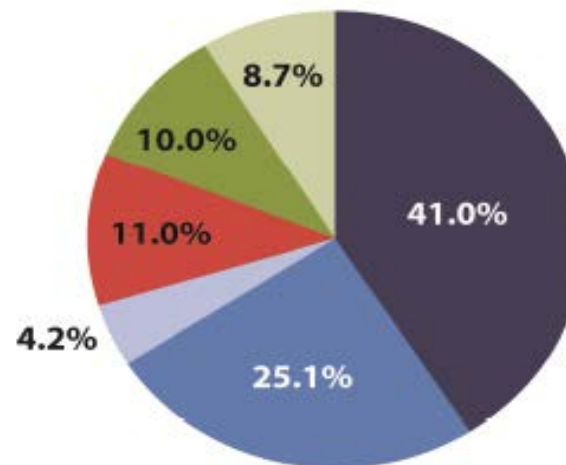
- **Scope of Study:**
 - I. Instructional Spending
 - II. Faculty Compensation
 - III. Faculty Workload
 - IV. Research Spending
 - V. Instructional Technology
 - VI. Research and Instructional Facilities

I. Instructional Spending

Instruction and Research Spending: Findings

Figure 1: Instruction and Research Was 66 Percent of E&G Spending at Research Institutions in 2010-2011

Instruction and Research: \$2.1 billion



Source: JLARC staff analysis of information reported by institutions to the National Center for Educational Statistics.

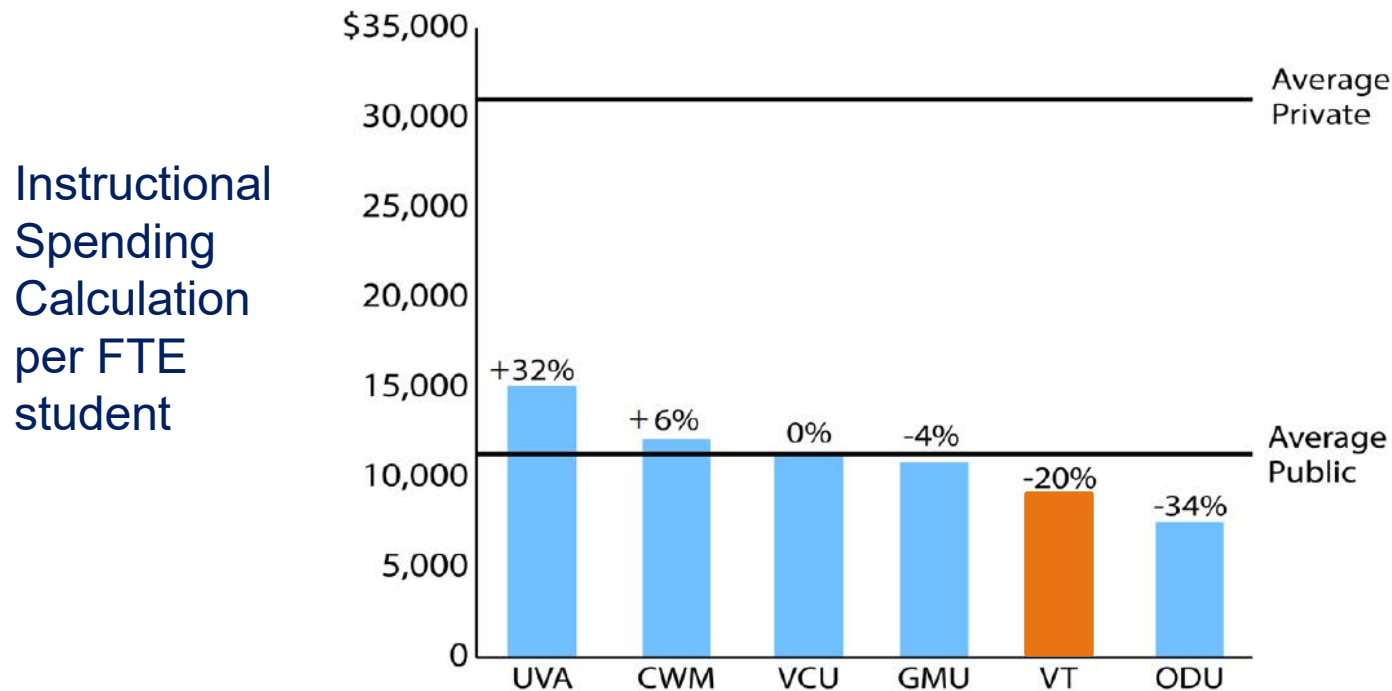
Virginia Tech, a Research Institution, spent 59.4% on Instruction & Research in 2010-11

Instructional Spending: Highlights

- Virginia's research institutions generally spend same or less than national average on instruction
- Faculty Compensation is the largest instructional expenditure
- Two-thirds of increase in statewide instructional spending is due to enrollment growth at research institutions
- Some Virginia institutions increased their reliance on lower cost contingent faculty; however, use of contingent faculty statewide is less than national average
- Student enrollment has shifted marginally towards more costly STEM-H disciplines, and this trend will likely continue

Instructional Spending: Findings

Virginia's Research Institutions Generally Spend Same or Less Than National Average on Instruction

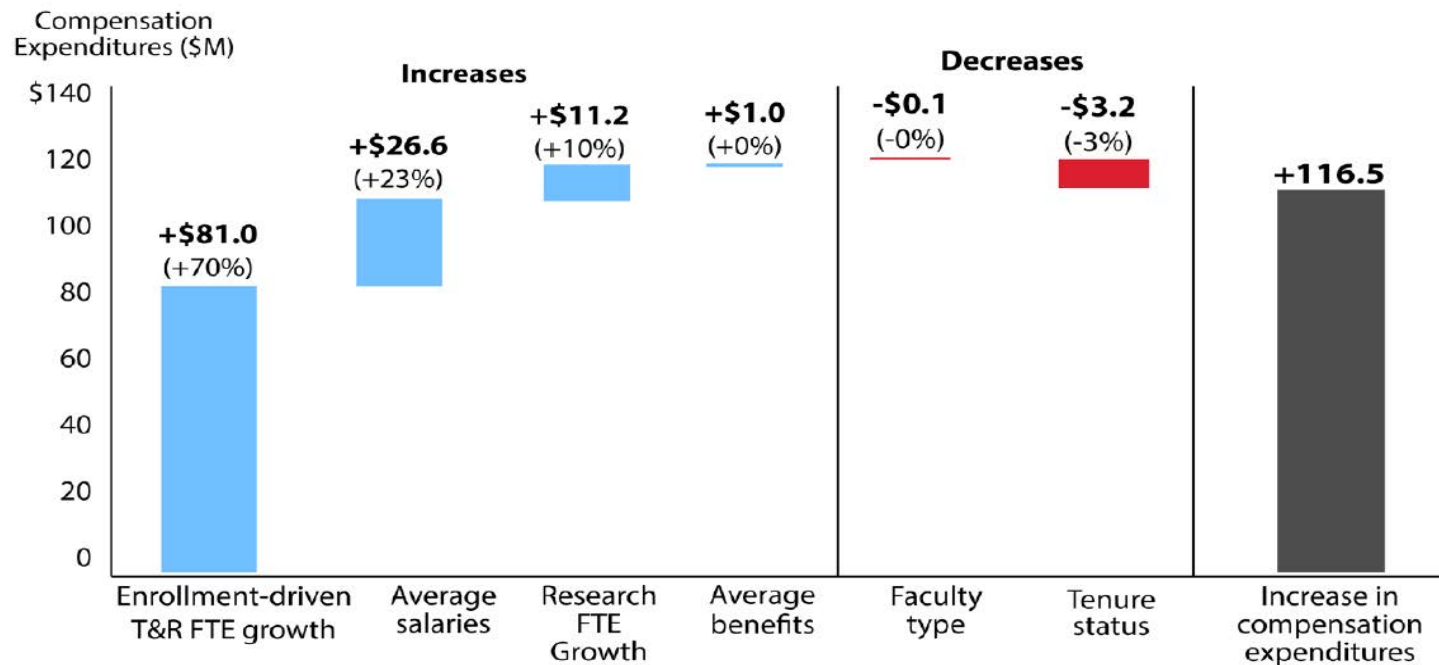


Note: Percentages indicate difference from national average for public institutions

Instructional Spending: Findings

Institutional spending on faculty increased largely to keep pace with student enrollment growth.

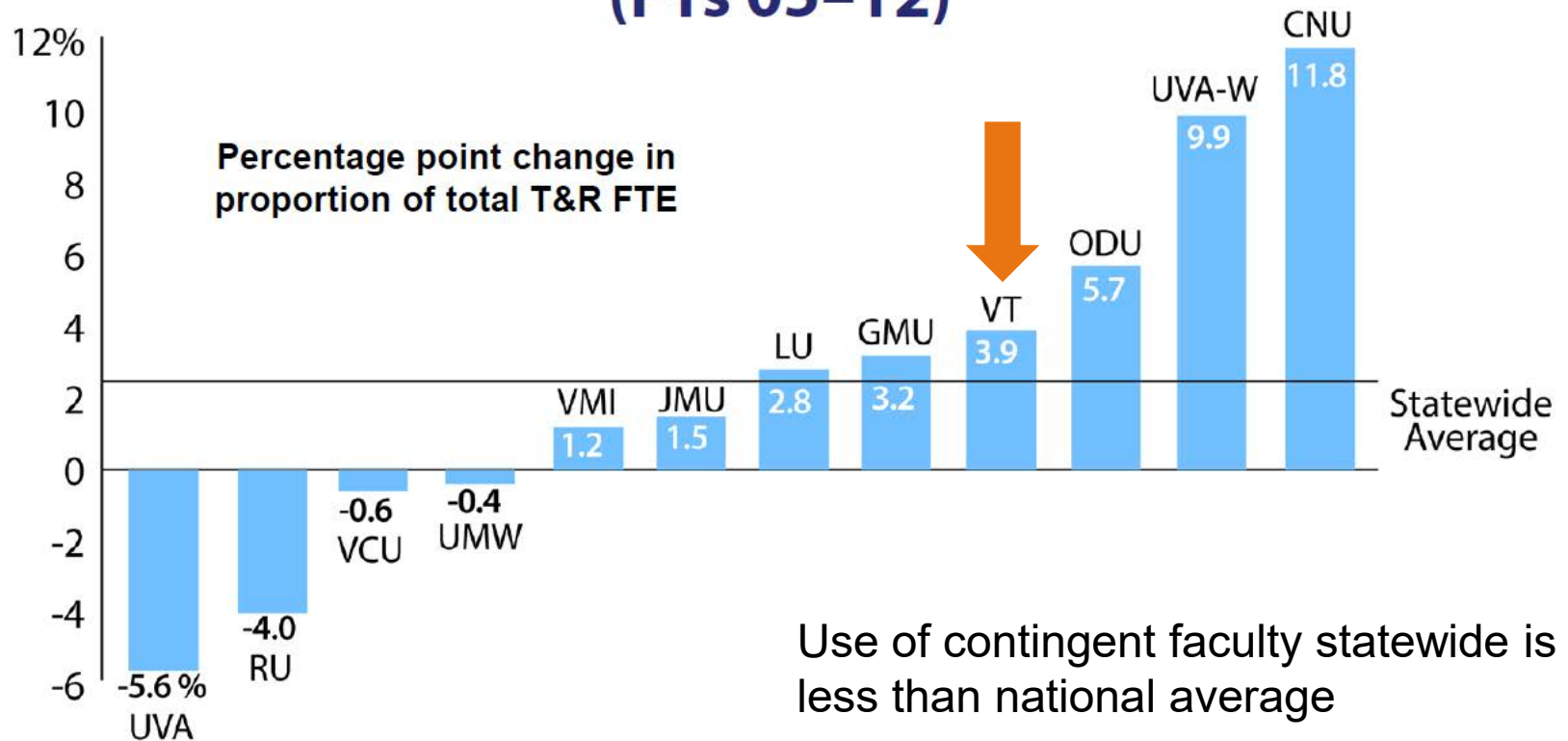
Faculty Growth Drove Majority of Increased Spending at Research Institutions (FYs 05–12)



Note: T&R and research faculty inflation-adjusted expenditures. CWM and VCU excluded; unable to provide complete data.

Enrollment Growth & Faculty Costs

Eight Institutions Increased Proportion of Contingent Faculty and Teaching Asst's (FYs 05–12)



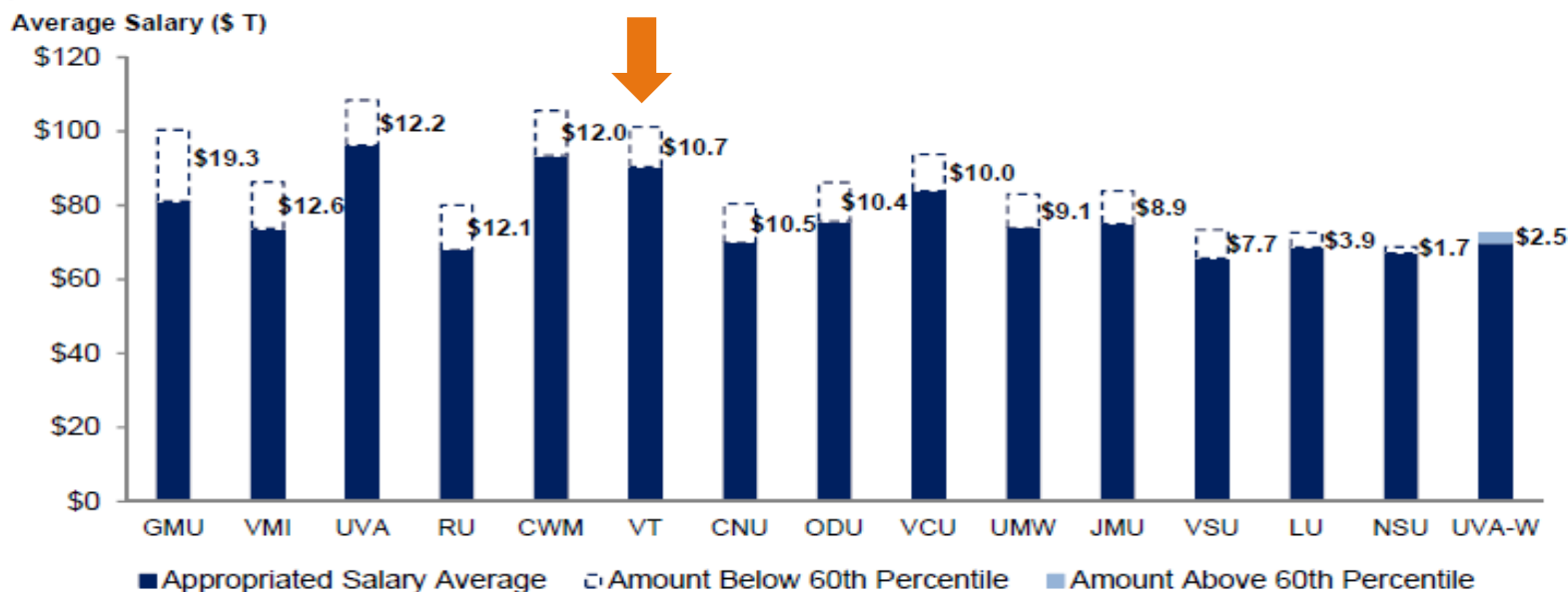
Note: LU and VCU data are for FY 2008–FY 2012. CWM, NSU, and VSU excluded; unable to provide complete data

II. Faculty Compensation

Faculty Compensation: Findings

Faculty salaries at most institutions are below the State policy goal and Carnegie Classification averages

Figure 11: Fourteen Institutions Fell Below the 60th Percentile of Their Peers, Nine By \$10,000 or More (2011-12)



Note: Average salaries are normalized to a 9/10 month contract. Excludes medical faculty. GMU's appropriated average salary does not include the 8.57 percent cost-of-living-adjustment made to faculty salaries due to Northern Virginia's high cost of living because of State policy excluding it from peer comparisons.

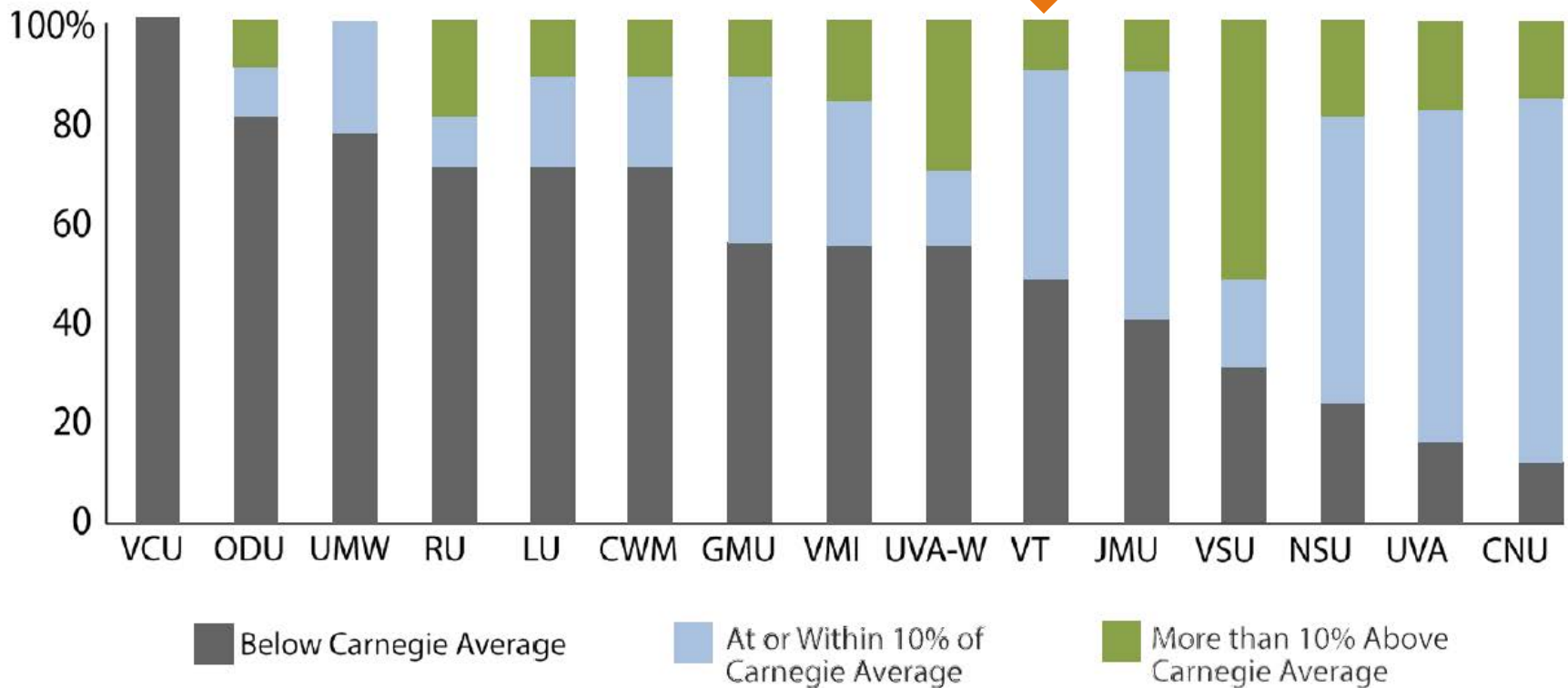
Source: JLARC staff analysis of SCHEV data on peer group percentiles.

For FY 2013, Virginia Tech is \$11,779 below the State goal of 60th percentile.

Faculty Compensation: Findings

Discipline-level Salaries In Virginia Near or Below Carnegie Averages

Percentages of Disciplines



Note: Average salaries for assistant professors in selected disciplines.

Faculty Compensation: Highlights

- Potential improvements to State process for comparing salaries:
 - Use current, actual salary data rather than appropriated salaries.
 - **Include private funding sources, such as endowments, to improve comparability to peer institutions.**
 - Benchmark salaries at the discipline level to provide a more precise comparison than the current approach of comparing institution-wide salaries
 - Improve the transparency of the peer selection process.

Faculty Compensation: Recommendations (1 & 2)

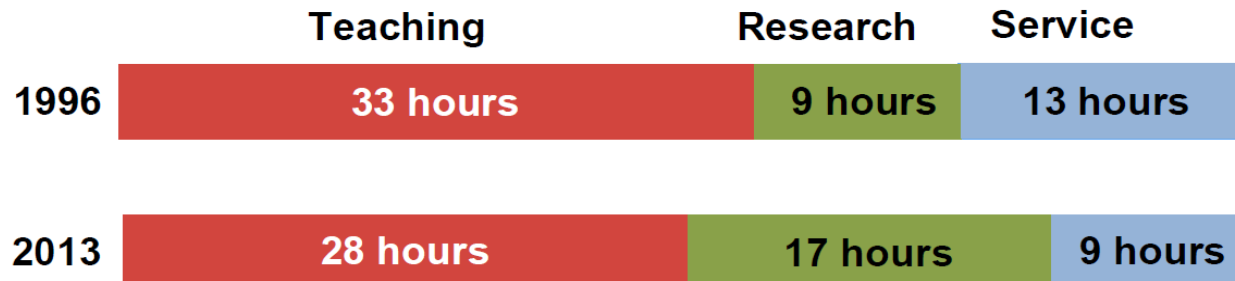
1. The General Assembly may wish to regularly re-base appropriated and actual faculty salaries.
2. The State Council of Higher Education (SCHEV) should:
 - Benchmark average faculty salaries at the discipline level
 - Improve the transparency of the peer group process by:
 - reporting the outcomes of its statistical model, and
 - the rationale for making modifications to the peer groups selected through the model.

III. Faculty Workload

Faculty Workload: Findings

Virginia faculty spend more time on research and less time on teaching and service than in 1996.

Faculty Spend More Time Each Week on Research, Less Time on Teaching and Service



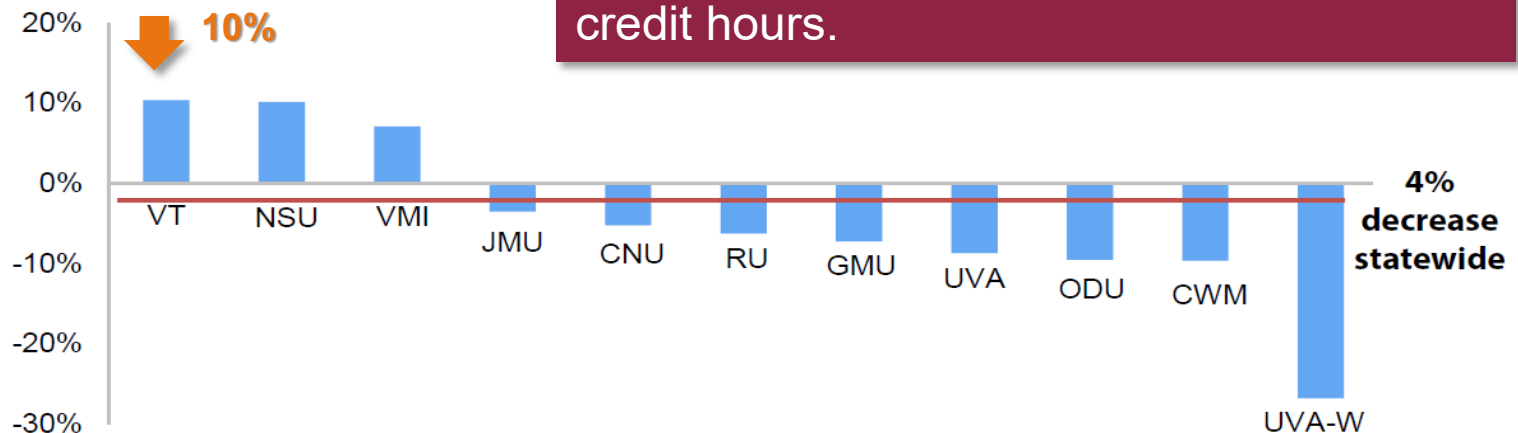
Note: Averages for all teaching and research faculty.

Faculty Workload: Findings

Tenured and tenure-track faculty are teaching marginally less in the classroom.

Tenured and Tenure-Track Faculty: Decrease In Student Credit Hour Loads

Change in Average Teaching
Loads Per Faculty FTE,
Fall 2004 to 2010

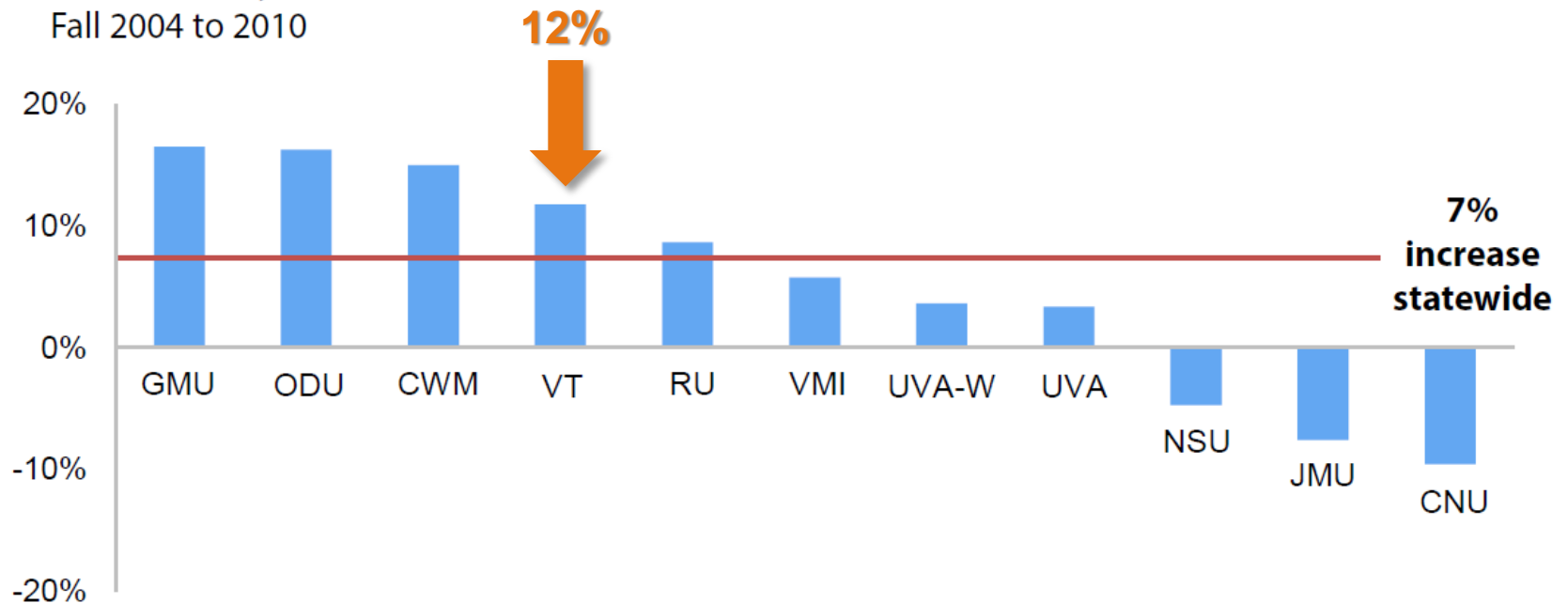


Note: Data were unavailable for LU, UMW, VCU, and VSU.

Faculty Workload: Findings

Non-Tenure-Track Faculty: Increase in Student Credit Hour Loads

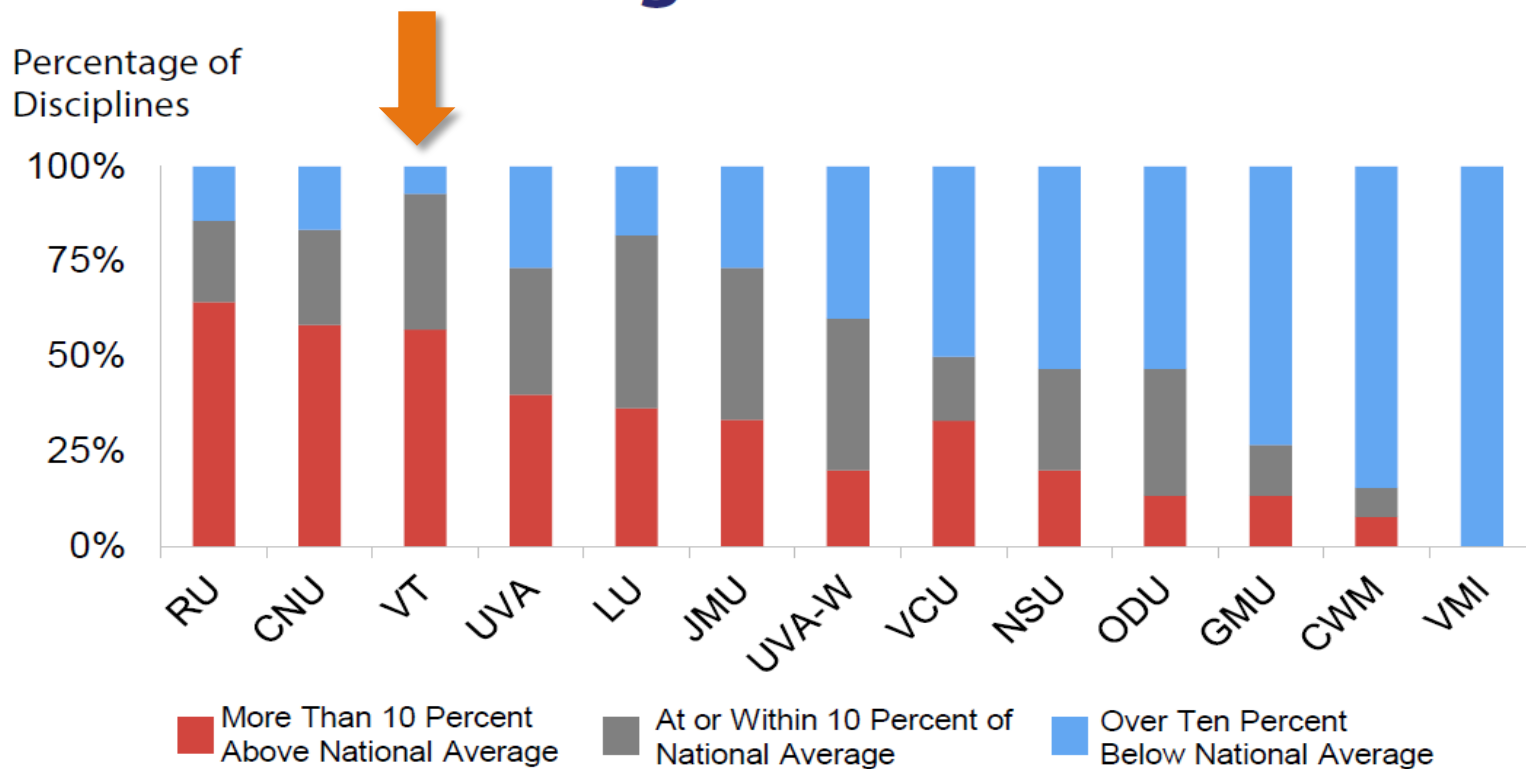
Change in Average Teaching
Loads Per Faculty FTE,
Fall 2004 to 2010



Note: Data were unavailable for LU, UMW, VCU, and VSU.

Faculty Workload: Findings

Faculty Workloads Are Not Consistently High or Low



Notes: Tenured and tenure-track faculty, 2010. Student credit hours compared to national averages. Data were unavailable for UMW and VSU.

Faculty Workload: Recommendation (3)

Boards of Visitors should consider:

- Requiring their institutions to conduct and participate in national faculty teaching load assessments that facilitate benchmarking average faculty teaching loads against similar institutions.

IV. Research Spending

Research Spending

Table 4: Higher Education Research Spending per Capita in Virginia Is Below the National Average and Comparable to Average in Southeast (FY 2011)


	Total per Capita Expenditures
Virginia	\$159
Southeast Average	152
U.S. Average	207

Notes: States included in the Southeast regional comparisons are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Includes private and public institutions.

Source: JLARC analysis of National Science Foundation and U.S. Census Bureau Data.

Research Spending: Findings

Research Spending Grew 62% (FY 2003–FY 2011)



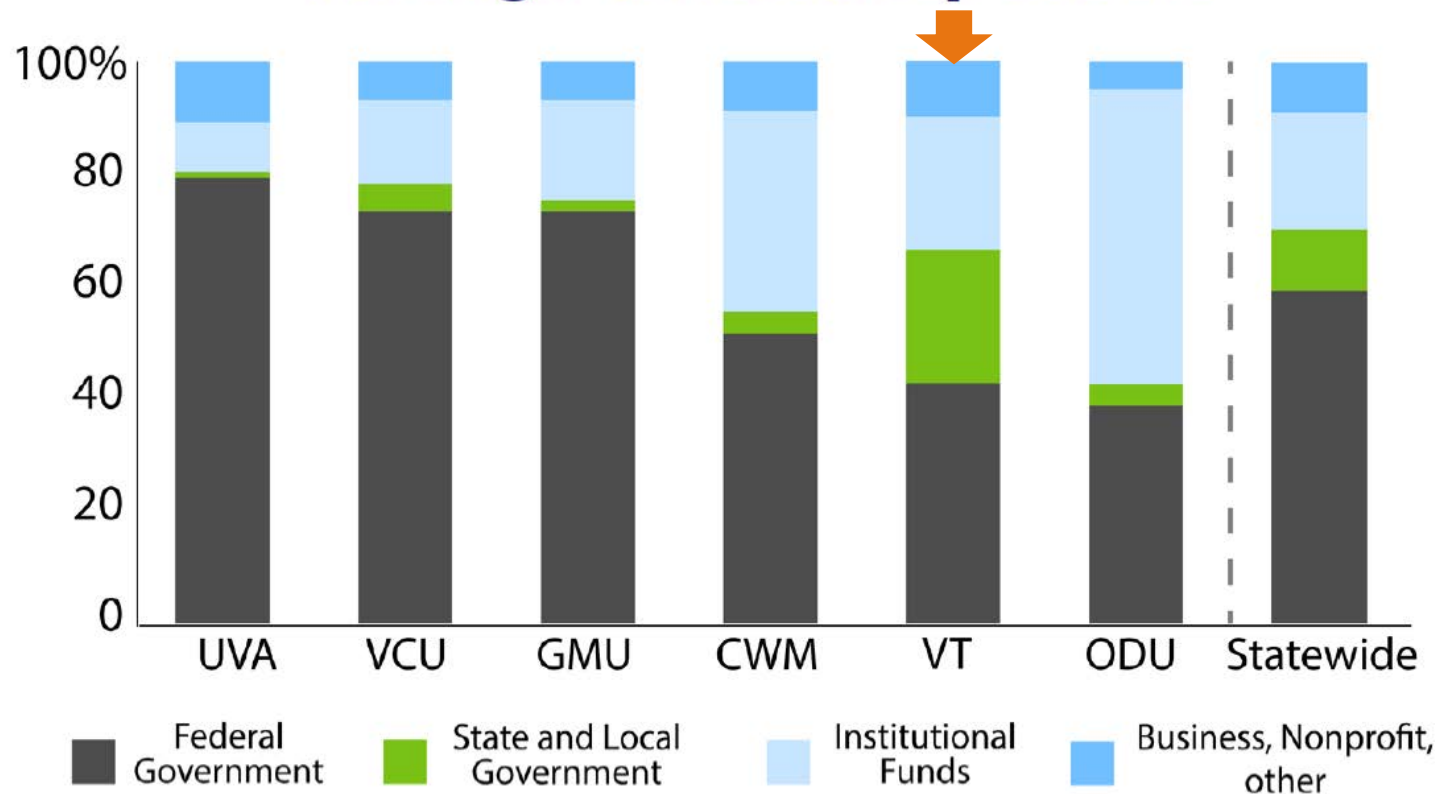
	Increase in Research Expenditures	Total Research Expenditures In FY 2011 (in millions)
VT	80.6%	\$450.1
UVA	38.7	292.1
VCU	49.0	207.8
ODU	199.2	102.2
GMU	59.7	88.1
CWM/VIMS	14.7	58.9
Statewide	62.1	1,199.1

Note: Not inflation-adjusted.

VT's research expenditures reflect, in part, its status as a land-grant university.

Research Spending: Findings

Majority of Research Activity Funded Through External Sponsors




Note: CWM includes VIMS

Highlights from report:

- Research institutions funded nearly \$300 million (FY 2011) in research cost, which is covered through a variety of sources – including tuition and fees.
- Research costs include cost sharing, unrecovered overhead, and institutional investments in research
- Sources of institutional funding for research
 - Tuition and fees
 - Unrestricted endowment funds
 - Recovered F&A (Facilities & Administrative) amounts
 - Unrestricted general funds
 - Revenue from the commercialization of research

Institutional Spending on Research

Sponsored Research Results in Cost Share and Indirect F&A Costs (FY 2012)



Institution	Total Cost (in millions)
VT	\$35.1
UVA	24.6
ODU	15.8
CWM	6.4
VCU	8.0
GMU	5.7
Statewide	95.6

F&A = Indirect facilities & administrative costs

Institutional Spending on Research

Institutions Pay for Research That Is Not Sponsored Externally (FY 2011)

	Estimated Spending (in millions)
VT	\$114.4
ODU	38.3
VCU	22.1
CWM	14.2
GMU	12.1
UVA	3.7
Statewide	204.5



Research Spending: Recommendation (4)

- **The General Assembly may wish to consider amending the Code of Virginia to:**
 - direct SCHEV to track State funding for higher education research from all sources
 - develop a process for institutions to report on the progress of State-supported research projects.

V. Instructional Technology

Instructional Technology - Highlights

- VA institutions use instructional technology less than in the region:
 - 4% of undergraduate student credit hours in VA delivered electronically; 2nd lowest among southern/mid-Atlantic region.
- Impact of instructional technology on costs and learning varies. The State could facilitate increased collaboration on instructional technology.
- Instructional technology has potential to reduce costs and improve learning; however, studies show mixed impact on costs and learning

Instructional Technology: Recommendation (5)

- **The General Assembly may wish to consider:**
 - Appropriating funding for SCHEV to coordinate a committee of institutional representatives on instructional technology.
 - The committee should identify best practices for lowering instructional expenditures per student while maintaining student learning.

VI. Instructional and Research Space

Instructional and Research Space

Most Institutions Increased Their Instructional Square Feet per Student

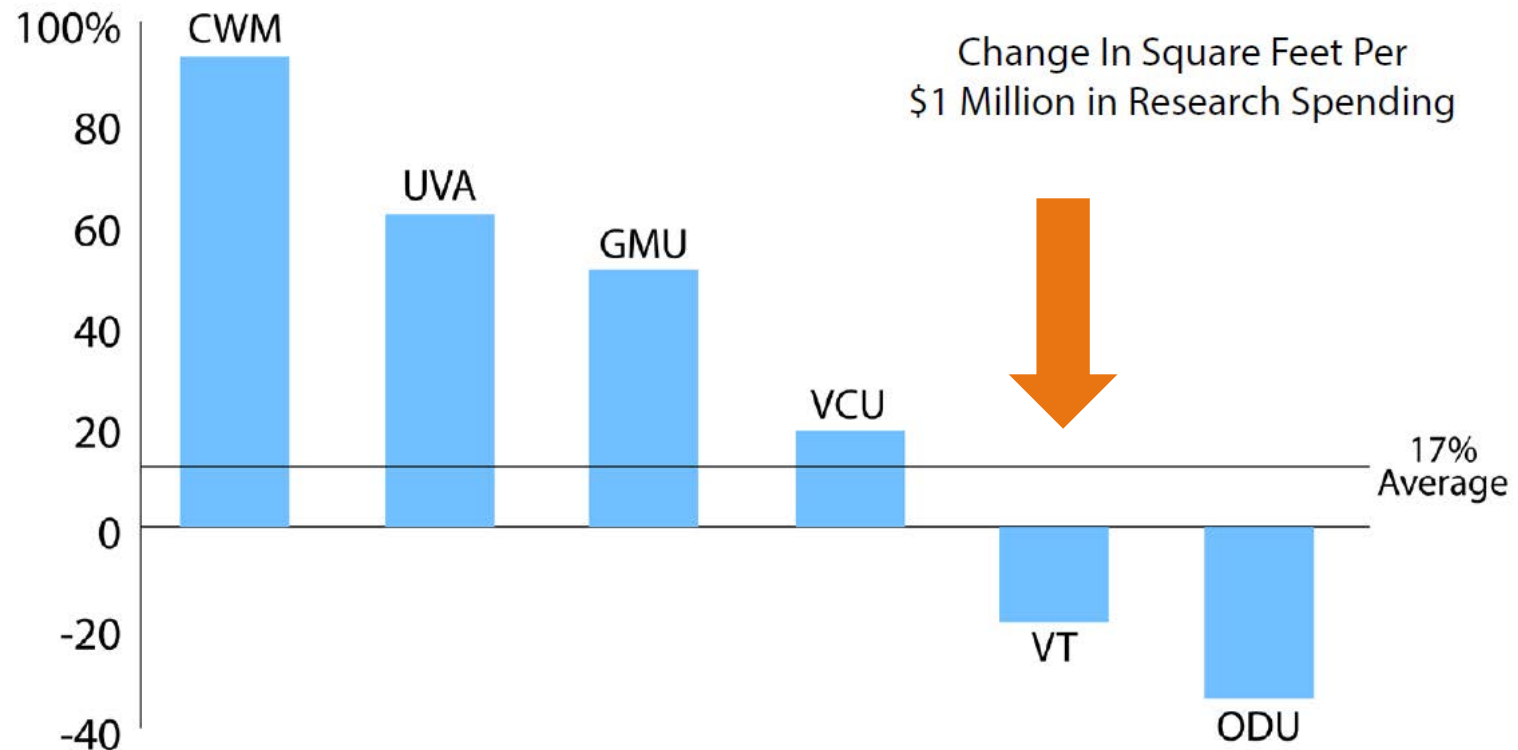
Institution type	Change in Instructional Square Feet per Student
Master's and Baccalaureate	7.4%
Research	4.0%

Note: FY 2005 to FY 2012.

Source: JLARC Academic Spending and Workload Report

Instructional and Research Space

Research Institutions Increased Research Square Footage By 17%



Note: FY 2005 to FY 2012

Instructional and Research Space: Highlights

- Code of Virginia and Appropriation Act established a 6-year capital planning process in 2008
- Process includes key executive and legislative branch stakeholders:
 - Six-Year Capital Outlay Advisory Committee (6PAC)
 - SCHEV assigns priority levels to proposed projects and makes recommendations to 6PAC.

Instructional and Research Space: Findings

- The State's capital planning process has not been consistently followed and some approval decisions were not consistent with SCHEV prioritization of projects.
 - 6PAC did not meet regularly enough after 2009 to oversee process
 - Not adhering to process may result in funding for lower priority projects.
- SCHEV's space guidelines are outdated; the need for additional instructional and research space cannot be adequately assessed:
 - Guidelines based on 40-year old standards
 - Fewer than half of institutions meet State guidelines for classroom and lab space utilization

Instructional and Research Space: Recommendation (6)

SCHEV should:

- Convene a working group of institutional staff to develop instructional and research space guidelines that adequately measure current and projected use of space.



Questions?



VT Applied Research Corporation Financial Status

M. Dwight Shelton, Jr.

Vice President for Finance and CFO

March 24, 2014

VT-ARC: Organizational Status

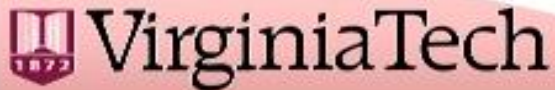
- Established in December 2009 as a private, non-stock Virginia corporation
- Approved as a university-affiliated corporation by the Board in March 2010
- VT-ARC began operations in FY 2011

VT-ARC: Mission

- Mission:
 - To extend the impact of university's research and development enterprise through developing, managing, and performing translational and applied research
- Research focus:
 - Current areas of research: intelligence, cyber security and information technology, defense and security
 - Future areas of research: health and energy

VT-ARC - Operational Focus

Public University



← Education & Research Focus

← Grant-Based

← Unclassified and Publishable

← Technical Breadth & Depth

← Discovery & Knowledge Creation

Customer/Mission Focus →

Contract-Based →

Classified & Restricted →

Programmatic Tools & Skills →

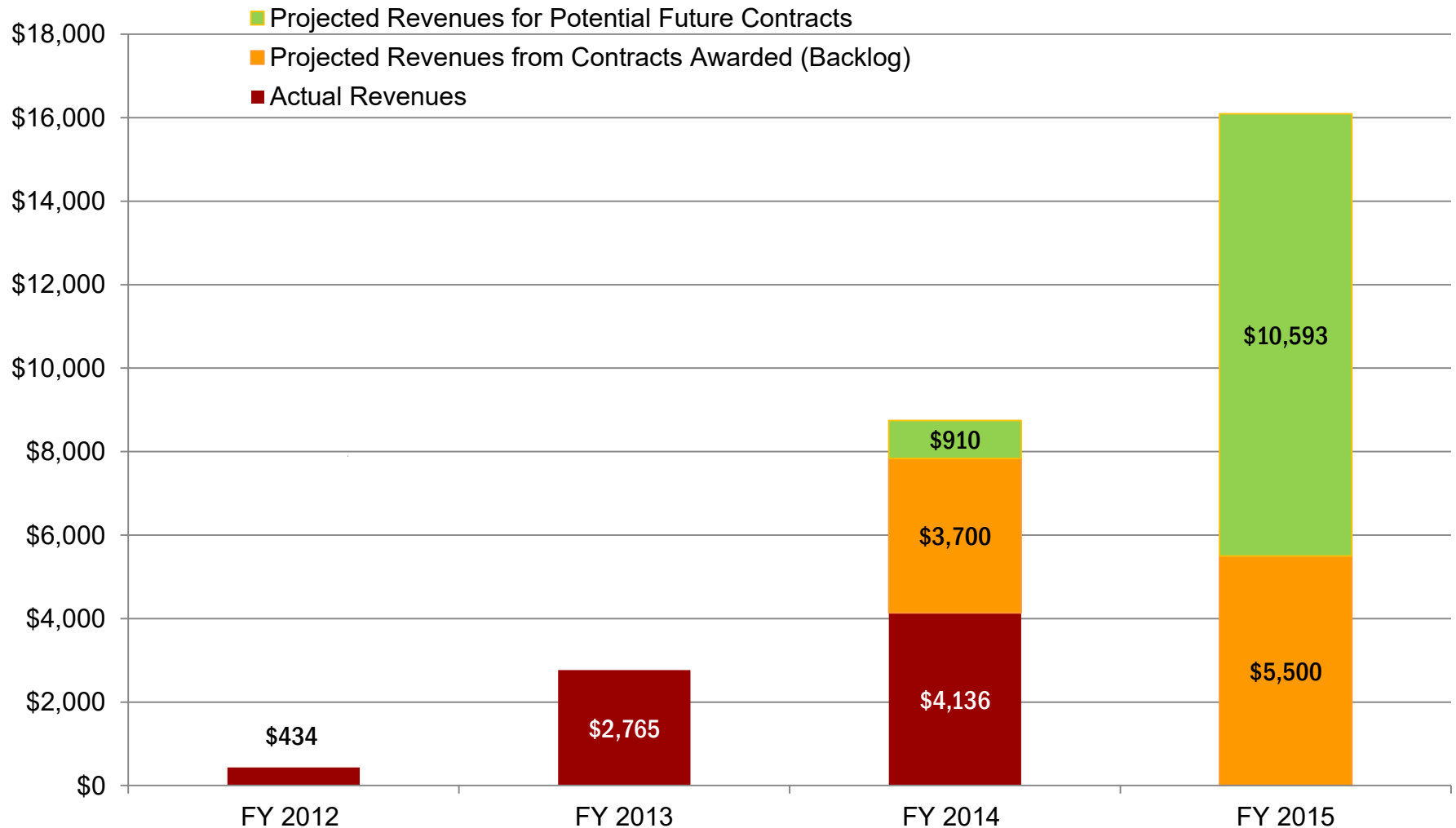
Cost, Schedule, & Performance →

**Private,
Non-Profit Corporation**



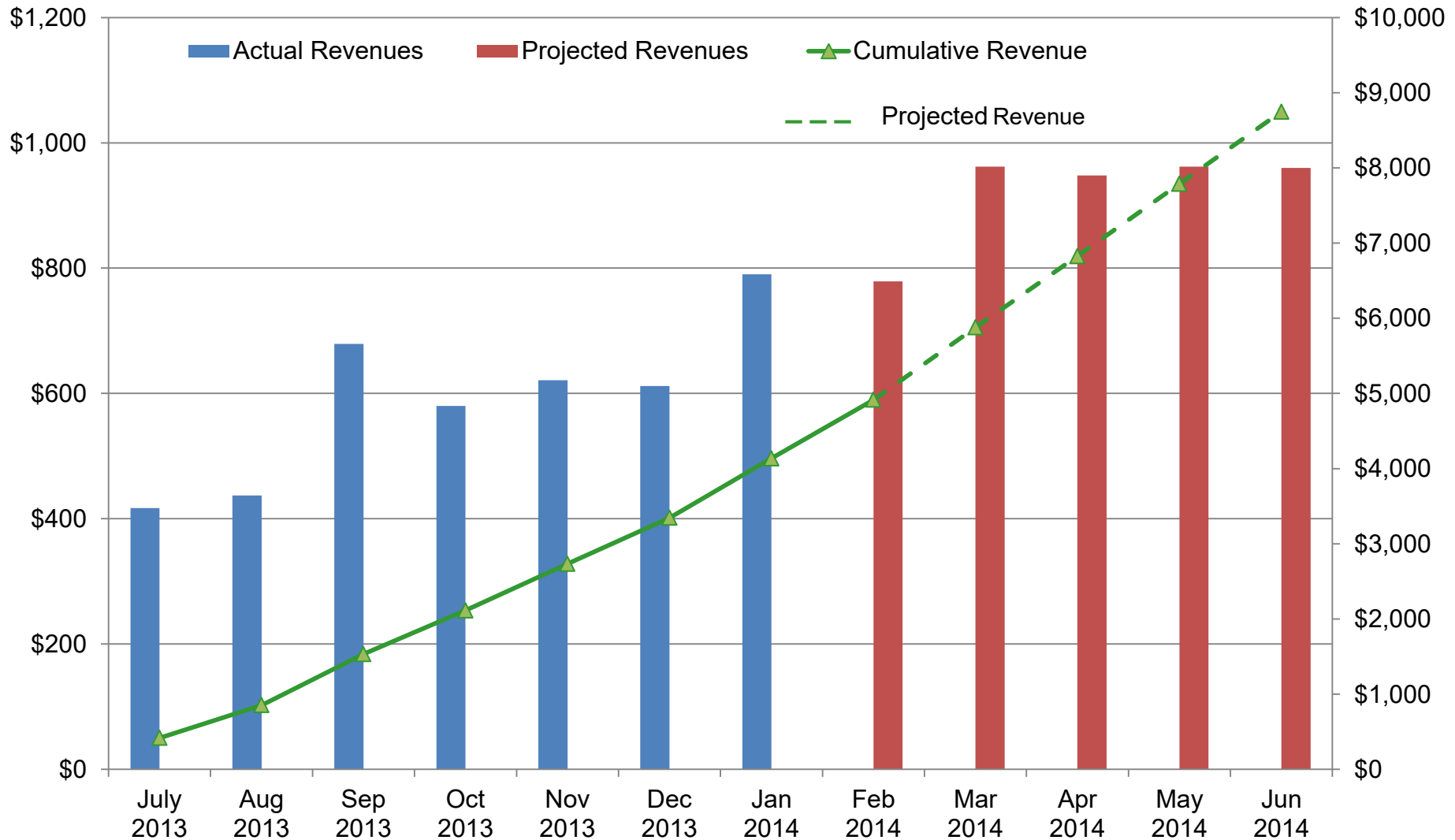
VT-ARC: Actual Total Revenues Thru Jan. 31st 2014 and Future Projections

(Dollars in Thousands)



VT-ARC Revenues – FY 2014

(Dollars in Thousands)



VT-ARC: Milestone Development

- Current \$4 million Line of Credit funded by VT and VTF is based on the achievement of specific milestones
- VT-ARC Board of Directors reviewed and evaluated several milestones at their Dec. 2013 meeting but final approval of the set of milestones was not provided at that time
- Milestones are currently being further refined
- Final approval of the milestones is expected at the VT-ARC's April 2014 Board of Directors meeting

VT-ARC: Examples of Potential Milestones

- Federal approval of Cost Accounting system and costing rates
- Positive trending of monthly cash flow rates
- Achievement of positive cash flow on a monthly basis
- Increasing levels of future period funding from awarded contracts (workload or task backlog)



Questions?

**2014-16 Appropriation Request
And Review of Executive Budget Amendments and Legislative Session**

FINANCE AND AUDIT COMMITTEE

March 10, 2014

Overview of the Appropriations Process

2014-16 Biennial Budget

On September 16, 2013, the university submitted budget decision packages supporting the university's recent six-year plan submission to the Department of Planning and Budget for consideration in the development of the Executive Budget for the 2014-16 biennium. Governor McDonnell then presented the Executive Budget for the upcoming biennium on Monday, December 16, 2013. The General Assembly session opened on January 8, 2014 and was scheduled to complete its work by March 8, 2014.

Traditionally, during the legislative session each chamber of the General Assembly will review the Executive Budget, introduce amendments as necessary, and pass an amended biennial budget proposal to be reviewed by the opposite chamber. As the two chambers' budgets often differ from each other, the budget proposals will be taken up by a Conference Committee. The Committee, which is composed of members of each chamber, then produces a compromise budget for final approval by the House and Senate. Once approved, the Governor will then be given 30 days to review the General Assembly's budget and propose any vetoes for consideration at the reconvened session beginning in April. After final General Assembly approval, the budget becomes a chapter within the current year's Acts of Assembly, and is thereafter referred to as the Appropriation Act. However, the 2014 session ended as scheduled without the General Assembly passing a biennial budget. This resulted in Governor McAuliffe calling for a special session that is scheduled to begin on March 24, 2014.

This report presents the major elements of the Executive Budget and General Assembly actions for the upcoming biennium.

Decision Package Summary

In early September 2013, the Department of Planning and Budget solicited the submission of agency budget requests, called decision packages. The Secretary of Education then instructed institutions to submit decision packages that were consistent with the institutional Six-Year plans and address the goals of the Higher Education Opportunity Act of 2011. Institutions were informed that requests for statewide issues such as base adequacy funding would not be necessary.

As referenced above, the university submitted several budget decision packages to the Department of Planning and Budget in September. Specifically, these requests covered

nine items totaling \$14.2 million in General Fund (GF) support for the University Division. A corresponding request for two items and \$1.9 million GF was submitted for the Cooperative Extension and Agricultural Experiment Station Division (CE/AES). The university's budget requests included the following items for 2014-15:

University Division (Agency 208)

Operating Requests:

- Advance Neuroscience and Life Science Research: \$5.8 million GF.
- Increase Virginia Undergraduate Enrollment: \$0.5 million GF.
- Expand and Enhance STEM-H Degree Production: \$2.4 million GF.
- Enhance Creative Technologies Programming and Degree Attainment: \$0.6 million GF.
- Increase Number of Full-Time Faculty to Address Enrollment Growth: \$1.2 million GF.
- Advance Translational Health Science Program: \$0.7 million GF.
- Expand Year-Round and E-Learning Opportunities: \$0.7 million GF.
- Increase Graduate Enrollment: \$0.9 million GF.
- Operations & Maintenance for New Facilities: \$1.4 million GF.

Cooperative Extension / Agricultural Experiment Station Division (Agency 229)

Operating Requests:

- Generation and Dissemination of Advancements in Food Safety and Agricultural Productivity Enhancements: \$0.8 million GF
- Operations & Maintenance of New Facilities: \$1.1 million GF.

Governor McDonnell proposed the 2014-16 biennial budget on Monday, December 16, 2013. The Executive Budget proposals included support for a portion of the above mentioned university requests, as well as several other items that would impact the university's budget and operating processes. These impacts are summarized in Attachment 1.

2014 General Assembly Session

The General Assembly session opened on January 8, 2014 and began reviewing proposed legislation at that time. The 2014-16 Executive Budget Bill was a major legislative proposal considered by the General Assembly. House and Senate members submitted amendments to the Executive Budget Bill on January 10, 2014 for consideration by the respective body's financial committee. The university submitted targeted requests for additional funding in support of:

University Division Operating:

- Neurological and Health Sciences Research, \$1.0 million GF.
- Creative Technologies Programming and Degree Attainment: \$0.6 million GF.
- Virginia Tech Transportation Institute: \$0.5 million GF.

The university was pleased with the Executive Budget proposals for the CE/AES Division operating budget; thus, no amendments were submitted for this Division.

Capital:

- Research facilities at Kentland Farm, \$7.6 million GF.
- Renew/Renovate Academic Buildings project of \$26.3 million GF.
- Chiller Plant Phase II of \$3.0 million GF.

The House Appropriations and Senate Finance Committees published their proposed changes to the 2014-16 Executive Budget amendments on February 18, 2014. Those proposals were taken up by the budget Conference Committee, in accordance with the normal process. However, the Conference Committee was not able to propose a compromise budget for the House and Senate approval by the General Assembly's adjournment on March 8, 2014. Additional details of the amendments to the Executive Budget offered by the House and Senate that impact Virginia Tech are summarized in Attachment 1.

While a final budget did not result, several items of interest that impact the university or higher education were proposed that are likely to be included in the 2014-16 biennial budget, once approved, including:

- **Compensation adjustments:** The House proposal included a 2 percent bonus for faculty and staff effective July 1, 2015, while the Senate proposed a 1 percent base salary increase on December 10, 2014 and a 1 percent bonus on December 1, 2015. Recent remarks by the House Appropriations Committee Chairman indicate that the House may support actions that more closely align with the Senate proposal. The interest by both chambers to support compensation priorities at institutions of higher education is encouraging.
- **Support for Operating:** The support planned in the Executive Budget for degree incentives and enrollment growth was reshaped by both the Senate and the House. The House focused on the operation and maintenance of facilities, increasing the number for faculty, and additional seats for instate undergraduate students, while the Senate reallocated some of these resources to support student financial aid.
- **Support for Research:** The House provided \$1.5M of additional support for research in health sciences, creative arts and technology, and transportation.
- **Equipment:** Both the House and Senate provided additional support for research equipment.
- **Restructuring:** Each chamber renewed Level III restructured institution's Management Agreements for an indefinite period.

- **Special Studies:** The House called for review of several operational items including faculty salary competitiveness, intercollegiate athletic revenue/expense reporting, and best practices for the use of instructional technology.
- **Airport Expansion:** The Executive Budget provides authorization for Virginia Tech to convey land to the VT-Montgomery Regional Airport Authority to facilitate the runway expansion project. The House and Senate did not make any changes to this authorization.

Other actions that impact the university or are of interest are summarized in Attachment 2. Attachments 1 and 2 include the Executive Budget as a point of reference.

Legislation with potential impact

As of January 28, 2013, 2,171 pieces of legislation had been filed for consideration by the 2014 General Assembly. The university has followed this legislation, particularly that which may impact the university, and advocated or influenced legislation impacting higher education when appropriate.

Legislation was proposed for a wide range of higher education related topics including restricting universities' use of tuition and general fund revenue, requiring enrollment ratios by residency, and providing in-state tuition eligibility for undocumented students. Ultimately, these initiatives were not successful.

However, some legislation that impacts higher education was approved by the General Assembly, including the following items:

- **HB132:** Adds the departments of emergency management, emergency services, public safety, and disaster management to the list of departments at state institutions of higher education in which commissioned officers and the Governor's military staff may receive instruction for a period not exceeding 10 months without being required to pay any fee or charge for tuition.
- **HB205:** Requires the board of visitors of each public institution of higher education in the Commonwealth to establish policies for the discipline of students who participate in varsity intercollegiate athletics. The bill requires such policies to include a provision requiring an annual report by the administration of the institution to the board of visitors or other governing board regarding enforcement actions taken pursuant to such policies.
- **HB258:** Prohibits public institutions of higher education from imposing restrictions on the time, place, and manner of student speech that occurs in the outdoor areas of the institution's campus and is protected by the First Amendment to the United States Constitution unless the restrictions (i) are reasonable, (ii) are justified without reference to the content of the regulated speech, (iii) are narrowly tailored to serve a significant government interest, and (iv) leave open ample alternative channels for communication of the information.

- HB501: Requires any student who was granted in-state tuition to be counted as an in-state student for the purposes of determining college admissions, enrollment, and tuition and fee revenue policies unless the student is a: foreign exchange, high school, or Southern Regional Education Compact student.
- HB703: Exempts from the Freedom of Information Act administrative investigations conducted by a public institution of higher education related to individual discrimination complaints or audits/investigations of any office, department, or program at such institutions.
- SB242: Prohibits institutions of higher education from selling students' personal information, including names, addresses, phone numbers, and email addresses, to any person.

Future Actions

The House and Senate's Conference Committee failed to pass a compromise budget by March 8, 2014. As a result, a special session has been scheduled for March 24, 2014, during which the General Assembly will resume working on the budget. Once passed, the Governor will have approximately 30 days to sign the Budget Bill as it is or make changes before the scheduled reconvened session on April 23, 2014.

PROPOSED APPROPRIATIONS FROM THE EXECUTIVE BUDGET AND EACH HOUSE OF THE GENERAL ASSEMBLY

as of Tuesday February 18, 2014 (Crossover)

(\$ in thousands)

Operating Budget

General Fund

University Division

	Executive Budget		House Budget		Senate Budget	
	2014-15	2015-16	2014-15	2015-16	2014-15	2015-16
Degree Incentives	\$ 3,444	\$ 3,444	\$ 1,036	\$	\$ 861	\$ 2,235
Enrollment Growth	589	589				
O&M of New Buildings			1,274	1,604		
Increase # of Faculty			1,863	1,863		
In-state Undergraduate Seats			600	600		
Up to 3% Bonus (Est. Central)	4,190					
2% Faculty Bonus FY16				1,963		
2% Staff Bonus FY16				706		
1% Faculty Bonus						1,022
1% Staff Bonus (Est. Central)						333
1% Faculty Salary					565	1,131
1% Staff Salary (Est. Central)					206	381
Compression Adjustment (Est. Central)	31	35	18	35		
Veteran and Military Education Consortium	46	175			46	175
Technical Adjustments (fringe rate changes, state systems charges, etc.)	657	675	657	675	657	675
<i>Subtotal University Division Operating</i>	8,956	4,918	5,448	7,447	2,336	5,952

Research

Brain Research	1,650	1,650	2,650	2,650	1,650	1,650
Center for the Arts & Technology Operating			300	300		
Transportation Institute Support			250	250		
<i>Subtotal Research</i>	1,650	1,650	3,200	3,200	1,650	1,650

Financial Aid

Undergraduate Financial Aid	100	100			280	453
Graduate Financial Aid	271	271	271	271	271	271
<i>Subtotal Financial Aid</i>	371	371	271	271	551	724

Equipment Trust Fund

Base	8,328	8,328	8,328	8,328	8,328	8,328
Research	4,278	4,278	6,978	4,278	6,673	6,673
<i>Subtotal Equipment Trust Fund</i>	12,606	12,606	15,306	12,606	15,001	15,001

Subtotal - University Division

Cooperative Extension/AES Division (CE/AES)

Operation and Maintenance of HABBI	1,150	1,173	1,150	1,173	1,150	1,173
Support for Agricultural Specialists	110	110	110	110	110	110
Up to 3% Bonus (Est. Central)	1,425					
2% Faculty and Staff Bonus FY16				989		
1% Faculty Bonus						235
1% Staff Bonus (Est. Central)						131
1% Faculty Salary					132	264
1% Staff Salary (Est. Central)					81	149
Compression Adjustment (Est. Central)	4	4	10	4		
Technical Adjustments (fringe rate changes, state systems charges, etc.)	132	134	132	134	132	134
Subtotal CE/AES Division	2,821	1,421	1,402	2,411	1,605	2,195

Total Operating Budget State Support

\$26,405	\$ 20,967	\$ 25,627	\$25,934	\$ 21,143	\$ 25,523
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PROPOSED APPROPRIATIONS FROM THE EXECUTIVE BUDGET AND EACH HOUSE OF THE GENERAL ASSEMBLY
as of Tuesday February 18, 2014 (Crossover)
(\$ in thousands)

Capital Budget

	Executive Budget		House Budget		Senate Budget	
	State	NGF	State	NGF	State	NGF
Maintenance Reserve FY2015	\$ 6,975		\$ 6,975		\$ 8,506 ⁽¹⁾	
Maintenance Reserve FY2016	6,975		6,975		8,506 ⁽¹⁾	
Capital Projects:						
Preplanning						
Detail Planning						
Academic Building Renovation/Renewal			<i>Listed in Funding Pool</i>		<i>Listed in Funding Pool</i>	
Improve Kentland Research Facilities (2)			<i>Listed in Funding Pool</i>		<i>Listed in Funding Pool</i>	
Construction						
FF&E Funding						
Classroom Building (3)	3,642		3,642		3,642	
Total	\$ 17,592	\$	\$ 17,592	\$	\$ 20,654	\$

Note:

The designation "Listed in Funding Pool" reflects inclusion in an appropriation for a pool of funds. A specific amount is provided for each project after a cost review is completed by the State's Department of General Services.

(1) The Senate increased the statewide Maintenance Reserve program by 22%, noting that agency and institutional amounts would be adjusted proportionately upon enrollment of the bill. The amounts shown in the Senate Budget section assumes a 22% increase for Virginia Tech over the introduced amount.

(2) Both the House and Senate propose allowing projects authorized for preplanning in the 2013 Session to continue to detail planning using NGF resources. Thus, the project may continue to the next design phase as all projects in item C-39.05.H.2 would now be authorized to proceed to detail planning.

(3) The amount is from the Department of General Services Funding Report that was sent to Virginia Tech as of 11/8/2013 that recommends \$3.642 million for FF&E funding and \$40.851 million for the total project.

**2014-16 BUDGETS AS OF CROSSOVER -- BASED ON COMMITTEE HALFSHEETS
AS OF TUESDAY FEBRUARY 18, 2014**

Each column reflects incremental adjustments to the 2014-16 biennial budget, as proposed by each body.

		Executive	House	Senate
Compensation	Statewide Bonus	<p>Up to 2% bonus on Dec. 1, 2014, if state reaches savings target for FY14.</p> <p>Additional 1% if savings/revenue targets generate twice the amount needed for the 1% action.</p> <p>GF share of bonus will be funded centrally.</p>	<p>Bonus of 2% for faculty and staff payable on July 1, 2015. Direct funding in 2015-16 supports the GF share for faculty and classified staff:</p> <p>If the revenue triggers are not met for the statewide bonus, higher education institutions are not authorized to provide a bonus. However, the funding shall remain within institutional appropriations and be used to support the institutions' operations.</p> <p>The governing authorities of institutions may provide the faculty bonus based on performance and other employment-related factors, as long as the bonuses do not exceed the average based on the general methodology utilized for other state employees.</p>	<p>Bonus of 1% for faculty and staff payable on December 1, 2015. Direct funding in 2015-16 supports the GF share for faculty. The GF share for classified employees will be funded centrally.</p>
	Base Salary Increase	N/A	N/A	<p>Direct funding supports the GF share of a 1% faculty salary increase in the first year, effective December 10th, 2014. The GF share for classified employees will be funded centrally.</p>
	Compression Adjustment	<p>Targeted 2% salary increase for specific high turnover jobs identified in the budget, effective July 25, 2014.</p>	<p>Delays salary action on targeted positions until December 10, 2014.</p>	<p>Reduces targeted high-turnover compensation adjustments proposed in Executive Budget to only Deputy Clerk of Court positions, eliminating impact on Institutions of Higher Education.</p>

Veteran and Military Member Education Consortium		Establishes a higher ed consortium (VT, JMU, ODU, UVA, VCCS, SCHEV) to help military personnel and veterans achieve higher education goals.	Executive Budget direct appropriation eliminated. Instead, institutions “may” use incremental operating support to implement the veteran education consortium activities.	No change to Executive Budget.
Tuition Authority		No change.	No change.	No change.
Fringe Benefit Rate Changes and Other Central Adjustments	Retirement	VRS rate increased from 8.76% to 12.33% for the 2014-16 biennium.	FY15: No change to Executive Budget FY16: If Revenue Reserve is not needed to address revenue reductions, VRS rate will be increased to the full VRS Board certified rate of 15.80%.	No change to Executive Budget.
	Fringe Rates	Increases to VaLORS, Group Life, VSDP, and Retiree Health.	Changes assessment of VSDP funding from a rate of 0.73 percent applied against covered payroll to 0.62 percent applied against total payroll.	Changes assessment of VSDP funding from a rate of 0.73 percent applied against covered payroll to 0.62 percent applied against total payroll.
	Health Care – Employer Share	Increase of approximately 5.25% to employer share in the first year, and by approximately 7% in the second year of the biennium.	No change to Executive Budget.	No change to Executive Budget.
	Health Care – Employee Share	Premium increase of between \$3 and \$13 per month, depending upon coverage plan	Copay for mail-order prescriptions increased to \$15 to reflect parity with increases to retail co-pay rates for tier 2, 3, and 4 pharmacy services.	No change to Executive Budget.
	Insurance Premiums	Increases to automobile insurance and workers’ compensation insurance programs. (Central)	No change to Executive Budget.	No change to Executive Budget.

Peer Process Review	N/A	SCHEV, along with SoE, DPB, HAC, SFC and institutions, shall "evaluate alternatives to the current faculty salary peer process including the impact of factors such as cost of living indices, faculty rank and discipline mix, private institutions and other comparative salary data. SCHEV shall report its findings to the Chairmen of the House Appropriations and Senate Finance Committees by December 1, 2014."	N/A
Instructional Technology Review	N/A	SCHEV, along with SoE, DPB, HAC, SFC and institutions, shall "evaluate the most effective use of instructional technologies such as Massive Open Online Courses (MOOC) in providing low-cost, quality education leading to degrees and certifications. SCHEV shall report its findings to the Chairmen of the House Appropriations and Senate Finance Committees by December 1, 2014."	N/A
Higher Education Funding Guidelines	<p>Language added to each institution's line item expressing anticipation that future funding will be allocated as follows:</p> <ul style="list-style-type: none"> ○ 30% Base operating costs ○ 42% Degree Incentives ○ 14% Enrollment Growth ○ 14% Initiatives/Research 	<p>Executive Budget language replaced with:</p> <p>"a. The following, consistent with the principles of the Higher Education Opportunity Act of 2011, are a guide to providing funding for public colleges and universities:</p> <ol style="list-style-type: none"> 1. Cost drivers should reflect the goals of increasing access especially for in-state undergraduate students, ensuring that college remains affordable especially for in-state undergraduate students, increasing the number of degrees, certificates and credentials, and improving the quality of higher education including research enhancements. 2. Funds were allocated using the cost drivers identified in the first paragraph of this item, prior commitments of the Commonwealth, the institutions six-year academic and financial plans, the incentive funding model circulated by the college presidents to the 2011 Higher Education Advisory Committee, legislative and institutional priorities including the goal of tuition moderation. 3. The allocation of funds, especially for tuition moderation, is intended to enhance affordability for all in-state students and serves as a viable alternative to the current financial aid models. Increased financial aid allocations may become viable under the model proposed in House Bill 573 and will be considered at that time. 	Eliminated funding guidelines in the Executive Budget in order to restore funding flexibility.

Research Matching and Reporting Requirement	Requires match or investment of 2X over 3 years or commercialization of a product. Requires agency-submitted report identifying the institution's research accomplishments & state's ROI.	Eliminated.	Eliminated.
Athletic Revenue/Expenditure Reporting	N/A	Calls for the APA, in collaboration with SCHEV, the State Comptroller, DPB, and IHEs to "develop a standardized reporting format for intercollegiate revenues and expenses to include treatment of student fees and classification of specific sports. Institutions of higher education shall resubmit its fiscal year 2012 report using this new format by December 1, 2014."	N/A
Financial Aid	Language states that financial aid funding is intended to enhance affordability for low and middle income students. Funds to be allocated according to partnership model. Requires institutional reporting on implementation through the 6-year plans.	<p>Page 475, strike lines 5 through 13 and insert: "b) Except as otherwise authorized under § 23-38.53:6, all awards made to undergraduate students from such Items shall be only for domiciled residents of Virginia as defined by § 23-7.4 and such awards shall offset all, or portions of, the costs of tuition and required fees, shall be proportionate to the remaining need of individual students, with students with higher levels of remaining need receiving grants before other students, and no criteria other than the remaining need of the student shall be used to determine the award amount. Because of the low cost of attendance and recognizing that federal grants provide a much higher portion of cost than at other institutions, a modified approach and minimum award amount for the neediest VGAP student should be implemented for community college and Richard Bland College students based on remaining need and the combination of federal and grant state aid. Student financial need shall be determined by a need-analysis system approved by the Council." Page 475, strike lines 35 through 43. Page 475, line 44, strike "3)" and insert "c)". Page 475, strike line 47.</p>	<p>SCHEV workgroup recommended language:</p> <ul style="list-style-type: none"> • Requires funding be transferred to E&G programs that supports work study or graduate assistantships. • Language also updates restrictions on the use of NGF for financial aid: <ol style="list-style-type: none"> 1. Funds derived from in-state student tuition will not subsidize out-of-state students, 2. Students receiving these funds must be making satisfactory academic progress, 3. Awards made to students should be based primarily on financial need, and 4. Institutions should make larger grant and scholarship awards to students taking the number of credit hours necessary to complete a degree in a timely manner.

Advanced Manufacturing Advisory Council	N/A	<p>Creates Advanced Manufacturing Advisory Council, which would:</p> <ul style="list-style-type: none"> • Be made up of 8 members: 2 industry reps from CCAM, 2 from VA Manufacturers Association, 3 from CoP (1 from senior institution and 2 from 2yr or higher ed centers), and 1 from Dept. of Veteran Services. • Ensure coordination of services, resources, and requests from agencies and IHEs by: <ul style="list-style-type: none"> • Reviewing any budget request of higher education institutions regarding advanced manufacturing workforce training, and • Make recommendations to Gov and GA on how to use veterans in adv manufacturing jobs, • Also extends treasury loan of \$25m to VEDP to develop Advanced Manufacturing Apprentice Academy to be match by federal and local/other grants. 	N/A
Auxiliary Enterprise Interest Earnings	N/A	<p>Modifies language regarding the recovery of the full indirect cost of auxiliary enterprise programs as recommended by HEAC:</p> <p>Item 3-4.01.A (page 450) Language strikes "as determined by the State Council of Higher Education" and inserts "as certified by institutions of higher education to the Comptroller subject to annual audit by the Auditor of Public Accounts."</p>	N/A
Nongeneral Fund Revenue		Removes the requirement of institutions to provide nongeneral fund revenue estimates to SCHEV, and eliminates the requirement that institutions request approval through SCHEV for administrative increases to nongeneral fund appropriations.	
Management Agreements	N/A	Renews indefinitely the Level III Management Agreements entered into in 2009.	Renews indefinitely the Level III Management Agreements entered into in 2009.
Athletic Coach Salaries	N/A	N/A	Caps GF support of any individual athletic coaching salary to \$100k as of July 1, 2013. Phase-down over a 5-year period at 20% per year until reaching

			the cap.
Higher Education Procurement Cooperative	Establishes a cooperative to leverage institutional procurement requirements to obtain financial advantages.	Eliminated.	Eliminated.
Unmanned Aircraft Systems	Provides up to \$1,199,495 in the first year and \$436,998 in the second year for “unmanned aircraft systems research and development. From FACT pool.	No change from Executive Budget.	Proposes \$1m GF in each year to support an Unmanned Vehicle Systems Working Group under the Secretary of Technology. (Item 418 #1s) The Senate also recommends an investment of \$4 million for a dedicated runway within the fence of the Wallops Flight Facility specifically for the testing of these aircraft.
Airport Expansion	Provides authorization to convey land to the VT-Montgomery Regional Airport Authority to grant a restrictive runway protection zone easement for a runway expansion. Further, the university shall retain all net proceeds from the sale to support the costs of relocating agricultural programs impacted by the sale of the land or granted easements.	No change from Executive Budget.	No change from Executive Budget.
Virtual Library of Virginia	Provides \$1.5m in the first year and \$1.6m in the second year for the Virtual Library of Virginia, specifically for STEM e-books.	No change from Executive Budget.	No change from Executive Budget.



Financial Performance Report

Second Quarter 2013-14

Tim Hodge, Assistant Vice President for
Budget and Financial Planning

March 24, 2014



Overview

- The university continuously monitors financial performance
- Each quarter the university provides the Board with an update on financial performance
- The annual budget represents the university's projection of operations
 - The original budget is as reviewed with the Board in June
 - The adjusted budget is revised as new information becomes available

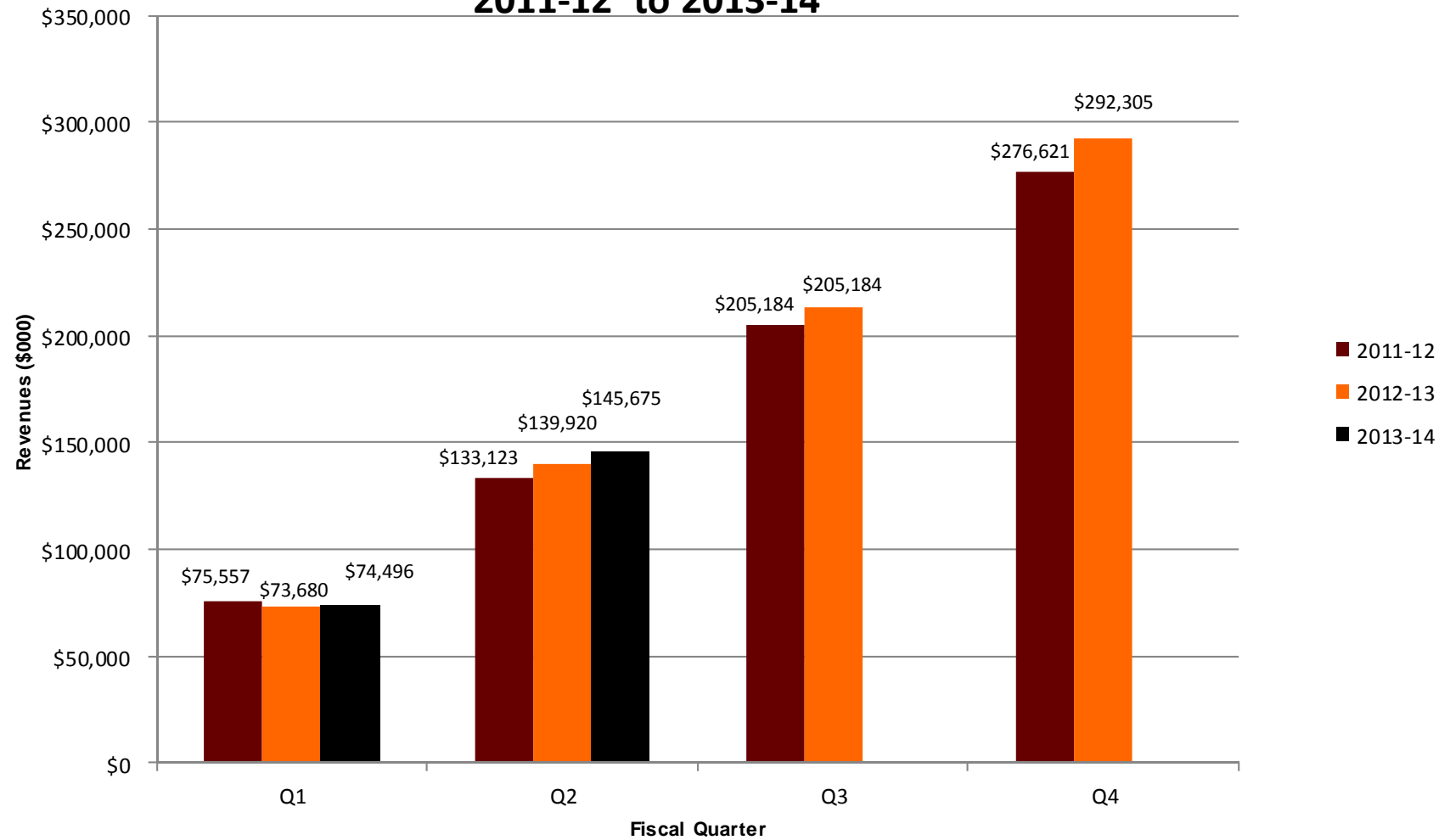


E&G Operating Budget

- Key Annual Budget Changes:
 - Tuition: Revenue budget increased for strong summer and fall enrollment
 - Continuing Education growth
 - General Fund: higher than anticipated central fund distribution.
- Performance:
 - University Division
 - Tuition exceeding projections due to Wintermester
 - Higher than projected activity continues from the Language and Cultural Institute
 - Increased case loads for Veterinary Medicine Teaching Hospital
 - CE/AES
 - Federal drawdowns are back on track: draw from 2012-13 received in 2013-14.



Sponsored Programs Revenue 2011-12 to 2013-14





Auxiliary Enterprises

- Key Annual Budget Changes:
 - Facility Projects:
 - Residence Halls – Upper Quad \$1.9M
 - Athletics – Marching Virginians Field \$2.4M
- Performance:
 - Dorms and Dining: strong occupancy and dining sales
 - Fleet Services & Inn at VT: lower than projected business volume, curtail costs
 - Licensing & Trademark Revenues: lower than budgeted royalties
 - Other activities are performing well.



Capital Outlay

- **Total capital program level currently authorized**
 - \$595 million over several years
- **Cumulative program expenses**
 - \$335.9 million inception-to-date
- **Significant total program adjustments**
 - Marching Virginians Practice Facility: The total budget was increased \$800 thousand to reflect early site work approval for the project.



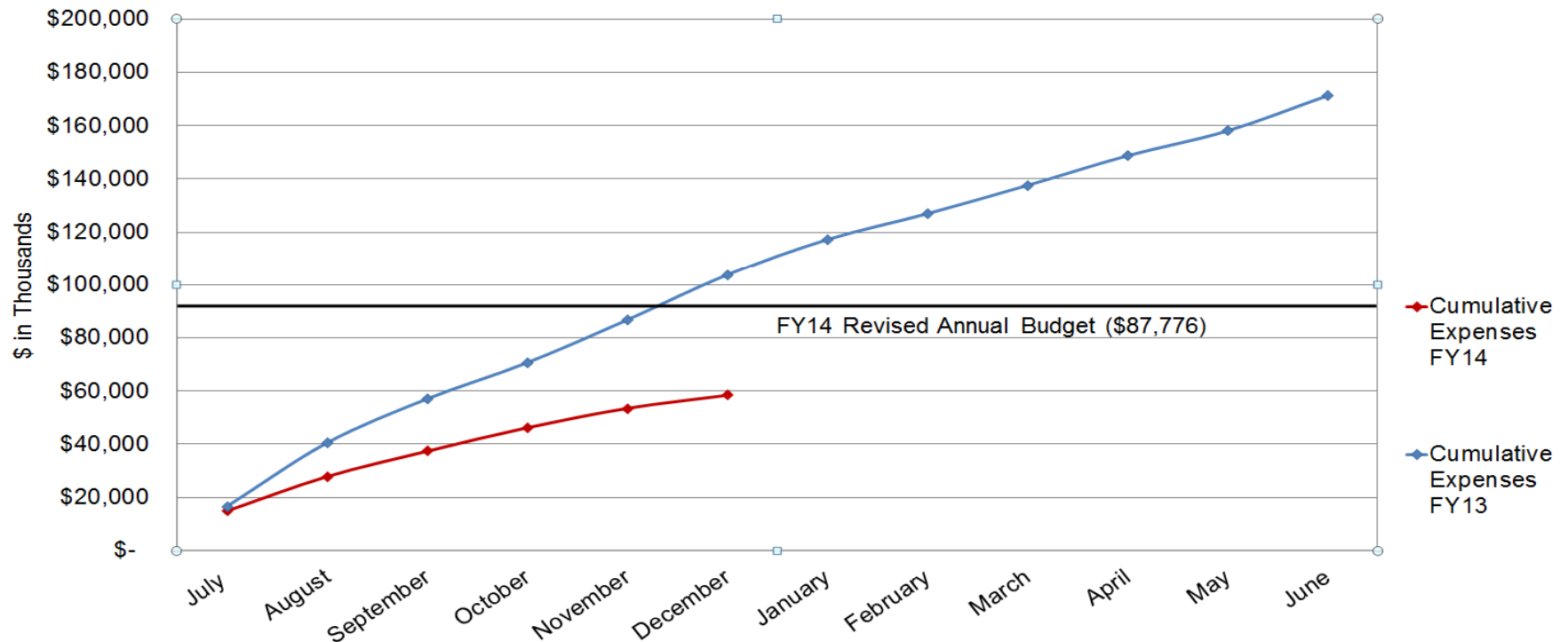
Capital Outlay

- **Annual capital budget as of second quarter**
 - \$87.8 million
- **Annual expenses as of second quarter**
 - \$58.4 million
- **Annual budget adjustments this quarter**
 - Total project budgets unchanged.
 - ❖ Human and Agricultural Biosciences Building I \$5.5 million



Capital Outlay Trends: Annual Performance

CAPITAL PROGRAM ANNUAL PERFORMANCE
Cumulative Monthly Expenditures
Fiscal Year 2013 and Fiscal Year 2014





Capital Outlay

- **Major Construction Underway**
 - Davidson Hall, Phase One
 - Signature Engineering Building
 - Unified Communications and Network Renewal
 - Upper Quad Residential Facilities



Questions?

Financial Performance Report - Operating and Capital

FINANCE AND AUDIT COMMITTEE

July 1, 2013 to December 31, 2013

The Financial Performance Report of income and expenditures is prepared from two sources: actual accounting data as recorded at Virginia Tech and the annual budgets which are also recorded in the university accounting system. The actual accounting data reflect the modified accrual basis of accounting, which recognizes revenues when received rather than when earned and the expenditures when obligated rather than when paid. The Original Budget was approved by the Board of Visitors at the June meeting. The Adjusted Budget reflects adjustments to incorporate actual experience or changes made during the fiscal year. These changes are presented for review and approval by the Finance and Audit Committee and the Board of Visitors through this report. Where adjustments impact appropriations at the state level, the university coordinates with the Department of Planning and Budget to ensure appropriations are reflected accurately.

The July to December 2013-14 budget (year-to-date) is prepared from historical data which reflects trends in expenditures from previous years as well as known changes in timing. Differences between the actual income and expenditures and the year-to-date budget may occur for a variety of reasons, such as an accelerated or delayed flow of documents through the accounting system, a change in spending patterns at the college level, or increases in revenues for a particular area.

Quarterly budget estimates are prepared to provide an intermediate measure of income and expenditures. Actual revenues and expenditures may vary from the budget estimates. The projected year-end budgets are, however, the final measure of budgetary performance.

OPERATING BUDGET

1. The 2013-14 tuition budget was developed without an estimate of the inaugural wintermester session. Due to the success of the first wintermester, tuition and fee revenues are exceeding projections by \$1.9 million. In addition, the university is experiencing stronger than budgeted spring enrollment. The tuition budget will be increased during the third quarter to accommodate wintermester.
2. All Other Income is higher than projected in milk and cattle sales, Veterinary Medicine Clinic sales, facility rental income, and program activity in the Virginia Tech Language and Culture Institute.
3. Academic and Support program expenditures are ahead of historical projections due to the timing of operating expenditures and recoveries.
4. The budget for federal revenue is established to match projected allotments from the federal government that are expected to be drawn down during the state fiscal year. All expenses in federal programs are covered by drawdowns of federal revenue up to allotted amounts. Federal revenue in the Cooperative Extension/Agricultural Experiment Station Division exceeds the projected budget due to the timing of a draw that was requested in 2012-13, but received in 2013-14.
5. Expenditures are temporarily exceeding projections due to the timing of recoveries from localities.
6. Quarterly and projected annual variances are explained in the Auxiliary Enterprises section of this report.
7. Historical patterns have been used to develop a measure of the revenue and expenditure activity for Sponsored Programs. Actual revenues and expenses may vary from the budget estimates because projects are initiated and concluded on an individual basis without regard to fiscal year. Total sponsored research revenues and expenses are less than projected, but sponsored research revenues are ahead of 2012-13 activity levels.
8. Revenues and Expenses for All Other Programs were less than projected due to lower than budgeted interest earnings and Surplus Property activity.
9. The General Fund revenue budget has been increased by \$29,729 for the Virtual Library of Virginia distribution costs and by \$1,958,239 for the actual central fund distribution for the state share of fringe benefit rate changes. The corresponding expenditure budgets have been adjusted accordingly.
10. The annual budget for Tuition and Fees has been increased by \$8,937 for the finalization of the budgets for tuition, E&G fees, Veterinary Medicine capitation, and unfunded scholarships, and by \$6,700,000 for strong summer and fall enrollment. The corresponding expenditure budgets have been adjusted accordingly.
11. The All Other Income revenue budget for the University Division has been increased by \$1,000,000 for Continuing Education and Center for Organizational and Technological Advancement programs. The corresponding expenditure budgets have been adjusted accordingly.
12. The General Fund revenue budget has been decreased by \$62,015 for the actual central fund distribution for the state share of fringe benefit rate changes. The corresponding expenditure budgets have been adjusted accordingly.
13. The projected year-end revenue and expense budgets for Student Financial Assistance were increased by \$31,050 for the Virginia Military Survivors & Dependents Program and \$87,000 for the Two-Year College Transfer Grant.
14. The projected annual budgets for All Other Programs were decreased \$9,058 to finalize the Investment and Debt Management budget, and the expense budgets increased \$137,407 for outstanding 2012-13 commitments that were initiated but not completed before June 30, 2013.

**OPERATING BUDGET
2013-14**

Attachment I

Dollars in Thousands

	July 1, 2013 to December 31, 2013			Annual Budget for 2013-14		
	Actual	Budget	Change	Original	Adjusted	Change
Educational and General Programs						
<u>University Division</u>						
<u>Revenues</u>						
General Fund	\$82,816	\$82,816	\$0	\$149,324	\$151,313	\$1,989 (9)
Tuition and Fees	228,806	223,754	5,052 (1)	382,785	389,493	6,708 (10)
All Other Income	22,236	17,932	4,304 (2)	31,173	32,173	1,000 (11)
Total Revenues	\$333,858	\$324,502	\$9,356	\$563,282	\$572,979	\$9,697
<u>Expenses</u>						
Academic Programs	\$-181,384	\$-180,421	\$-963 (3)	\$-382,215	\$-387,779	\$-5,564 (9,10,11)
Support Programs	-98,678	-95,203	-3,475 (3)	-181,067	-185,200	-4,133 (9,10)
Total Expenses	\$-280,062	\$-275,624	\$-4,438	\$-563,282	\$-572,979	\$-9,697
NET	\$53,796	\$48,878	\$4,918	\$0	\$0	\$0
<u>CE/AES Division</u>						
<u>Revenues</u>						
General Fund	\$32,303	\$32,303	\$0	\$64,676	\$64,614	\$-62 (12)
Federal Appropriation	11,065	8,872	2,193 (4)	14,521	14,521	0
All Other Income	479	466	13	839	839	0
Total Revenues	\$43,847	\$41,641	\$2,206	\$80,036	\$79,974	\$-62
<u>Expenses</u>						
Academic Programs	\$-40,712	\$-39,595	\$-1,117 (5)	\$-73,751	\$-73,689	\$62 (12)
Support Programs	-2,836	-2,531	-305	-6,285	-6,285	0
Total Expenses	\$-43,548	\$-42,126	\$-1,422	\$-80,036	\$-79,974	\$62
NET	\$299	\$-485	\$784	\$0	\$0	\$0
Auxiliary Enterprises						
Revenues	\$157,832	\$157,126	\$706 (6)	\$286,543	\$285,514	\$-1,029 (6)
Expenses	-140,461	-146,469	6,008 (6)	-281,556	-292,516	-10,960 (6)
Reserve Drawdown (Deposit)	-17,371	-10,657	-6,714 (6)	-4,987	7,002	11,989 (6)
NET	\$0	\$0	\$0	\$0	\$0	\$0
Sponsored Programs						
Revenues	\$145,675	\$159,362	\$-13,687 (7)	\$329,738	\$329,738	\$0
Expenses	-158,444	-174,584	16,140 (7)	-329,738	-329,738	0
Reserve Drawdown (Deposit)	12,769	15,222	-2,453	0	0	0
NET	\$0	\$0	\$0	\$0	\$0	\$0
Student Financial Assistance						
General Fund	\$9,853	\$9,881	\$-28	\$19,706	\$19,824	\$118 (13)
Expenses	-9,690	-9,717	27	-19,706	-19,824	-118 (13)
Reserve Drawdown	0	0	0	0	0	0
NET	\$163	\$164	\$-1	\$0	\$0	\$0
All Other Programs *						
Revenue	\$2,823	\$3,177	\$-354 (8)	\$6,313	\$6,304	\$-9 (14)
Expenses	-3,013	-3,362	349 (8)	-6,313	-6,441	-128 (14)
Reserve Drawdown (Deposit)	190	185	5 (8)	0	137	137 (14)
NET	\$0	\$0	\$0	\$0	\$0	\$0
Total University						
Revenues	\$693,888	\$695,689	\$-1,801	\$1,285,618	\$1,294,333	\$8,715
Expenses	-635,218	-651,882	16,664	-1,280,631	-1,301,472	-20,841
Reserve Drawdown (Deposit)	-4,412	4,750	-9,162	-4,987	7,139	12,126
NET	\$54,258	\$48,557	\$5,701	\$0	\$0	\$0

* All Other Programs include federal work study, alumni affairs, surplus property, and unique military activities.

1. Revenues in Residence and Dining Halls are higher than projected due to higher than anticipated dorm occupancy and Dining meal plan sales. Expenses are lower than expected due to the timing of one-time projects in the residence halls.
2. Revenues and expenses in Parking and Transportation Services are lower than projected due to lower than forecasted Fleet Services business volume.
3. Revenues for the University Services System are higher than projected due to higher than projected student fees and self-generated revenue in Recreational Sports and Student Health Services. Expenses are lower than projected due to the timing of expenses.
4. Expenditures for Intercollegiate Athletics are lower than projected due to timing of operating expenses and one-time sport facility related projects.
5. Revenue and expenses for the Inn at Virginia Tech and Skelton Conference Center are lower than projected due to lower than projected business volume. Expenditures are being reduced accordingly.
6. Expenses for Other Enterprise Functions are lower than projected due to timing of operating expenses.
7. The projected annual expense budget for Auxiliary Enterprises was adjusted for \$6.5 million in outstanding 2012-13 commitments and projects that were initiated but not completed before June 30, 2013. This amount includes \$1.5 million in Telecommunications projects, and \$2.8 million in Residence Hall projects. The remainder is spread across the other auxiliary programs.
8. The projected annual expense and reserve budgets for Residence and Dining Halls were adjusted \$1.9 million for a planned contribution to the Upper Quad capital project.
9. The projected annual revenue and expense budgets for Telecommunications Services were adjusted for increased on-campus project activity, this adjustment was partially offset by decreased revenues and expenses associated with the updated Unified Communication Project planning assumptions and activity in the National Capital Region.
10. The projected annual expense and reserve budgets for University Services System were adjusted \$482,000 for roof and concrete repairs in Student Centers and Activities.
11. The projected annual revenue budget for Intercollegiate Athletics was adjusted \$542,751 to accommodate decreased revenue from football season tickets, men's basketball season tickets, and women's basketball season tickets. These decreases were offset by increased revenue from the Sun Bowl, men's basketball away tickets, conference allocation, NCAA enhancement and opportunity fund, and Licensing. Annual expense and reserve draw budgets were adjusted \$4.1 million to accommodate the Marching Virginian's practice facility, the Sun Bowl, the procurement of equipment, and operating adjustments. These increases were partially offset by decreases to the personnel budget.
12. The projected annual revenue and expense budgets for Electric Services were adjusted to accommodate for revised 2013-14 cost of wholesale electricity and reduced customer rates, for an allowance to plan for the next substation, as well as for the purchase of new equipment.
13. The projected annual revenue, expense, and reserve budgets for Other Enterprise Functions were adjusted for Central Chiller Plant Infrastructure, the timing of clearing accounts, Licensing and Trademark scholarship contributions, the planned Marching Virginians band uniform replacement, the Rescue Squad garage project, as well as for contractual changes in the Library Café.

**UNIVERSITY DIVISION
AUXILIARY ENTERPRISES**

Attachment I

Dollars in Thousands

	July 1, 2013 to December 31, 2013			Annual Budget for 2013-14		
	Actual	Budget	Change	Original	Adjusted	Change
Residence and Dining Halls						
Revenues	\$56,933	\$55,849	\$1,084 (1)	\$101,342	\$101,342	\$0
Expenses	-45,531	-46,983	1,452 (1)	-97,575	-102,428	-4,853 (7,8)
Reserve Drawdown (Deposit)	-11,402	-8,866	-2,536	-3,767	1,086	4,853 (7,8)
Net	\$0	\$0	\$0	\$0	\$0	\$0
Parking and Transportation						
Revenues	\$7,100	\$7,453	\$-353 (2)	\$12,736	\$12,736	\$0
Expenses	-6,840	-7,217	377 (2)	-13,242	-13,736	-494 (7)
Reserve Drawdown (Deposit)	-260	-236	-24	506	1,000	494 (7)
Net	\$0	\$0	\$0	\$0	\$0	\$0
Telecommunications Services						
Revenues	\$10,385	\$10,475	\$-90	\$19,337	\$19,761	\$424 (9)
Expenses	-9,148	-9,221	73	-19,148	-21,040	-1,892 (7,9)
Reserve Drawdown (Deposit)	-1,237	-1,254	17	-189	1,279	1,468 (7,9)
Net	\$0	\$0	\$0	\$0	\$0	\$0
University Services System						
Revenues	\$22,452	\$22,008	\$444 (3)	\$40,099	\$40,099	\$0
Expenses	-21,885	-23,503	1,618 (3)	-39,082	-40,626	-1,544 (7,10)
Reserve Drawdown (Deposit)	-567	1,495	-2,062	-1,017	527	1,544 (7,10)
Net	\$0	\$0	\$0	\$0	\$0	\$0
Intercollegiate Athletics						
Revenues	\$33,221	\$33,252	\$-31	\$55,507	\$54,964	\$-543
Expenses	-31,849	-33,186	1,337 (4)	-55,590	-59,684	-4,094 (7,11)
Reserve Drawdown (Deposit)	-1,372	-66	-1,306 (4)	83	4,720	4,637 (7,11)
Net	\$0	\$0	\$0	\$0	\$0	\$0
Electric Service						
Revenues	\$15,776	\$15,969	\$-193	\$36,377	\$35,506	\$-871 (12)
Expenses	-17,179	-17,307	128	-35,642	-35,310	332 (7,12)
Reserve Drawdown (Deposit)	1,403	1,338	65	-735	-196	539 (7,12)
Net	\$0	\$0	\$0	\$0	\$0	\$0
Inn at Virginia Tech/Skelton Conf. Center						
Revenues	\$5,753	\$5,942	\$-189 (5)	\$11,078	\$11,078	\$0
Expenses	-5,898	-6,524	626 (5)	-11,375	-11,574	-199 (7)
Reserve Drawdown (Deposit)	145	582	-437 (5)	297	496	199 (7)
Net	\$0	\$0	\$0	\$0	\$0	\$0
Other Enterprise Functions						
Revenues	\$6,212	\$6,178	\$34	\$10,067	\$10,028	\$-39 (13)
Expenses	-2,131	-2,528	397 (6)	-9,902	-8,118	1,784 (7,13)
Reserve Drawdown (Deposit)	-4,081	-3,650	-431 (6)	-165	-1,910	-1,745 (7,13)
Net	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL AUXILIARIES						
Revenues	\$157,832	\$157,126	\$706	\$286,543	\$285,514	\$-1,029
Expenses	-140,461	-146,469	6,008	-281,556	-292,516	-10,960
Reserve Drawdown (Deposit)	-17,371	-10,657	-6,714	-4,987	7,002	11,989
Net	\$0	\$0	\$0	\$0	\$0	\$0

CAPITAL OUTLAY BUDGET**Educational and General Projects**

1. The total project budget amounts reflect the balance of maintenance reserve appropriation carried forward from fiscal year 2013 and the state's fiscal year 2014 allocation of \$5.649 million of Maintenance Reserve funds. The current year revised annual budget reflects reaching the 85 percent expenditure performance requirement.
2. This project will support progress on fire alarm systems and accessibility improvements for several E&G buildings including Randolph Hall, War Memorial Hall, Food Science and Technology Building, Norris Hall, Newman Library, Lane Hall, Patton Hall, Litton Reaves Hall, Whittemore Hall, Architecture Annex, and Wallace Annex. The implementation plan calls for improvements to be executed in multiple packages. Design work is underway for the various packages and construction funding will be released on a package-by-package basis as design cost reviews are completed by the state. The annual budget assumes the release of some construction funding this fiscal year.
3. This project is for a 73,000 gross square foot classroom building to meet the university's instructional classroom and laboratory needs. The original annual budget of \$10 million reflected an anticipated allocation of construction funds for an approximately \$42.5 million project prior to July 1, 2013. At the completion of the preliminary design cost review in November 2013, the university's cost estimate for the project remains above the state's approved cost for the project and funds have not been released. Thus, the university will continue through the end of working drawings to obtain market-based construction pricing for the authorized project scope. Because the state has not yet released construction funds, the annual budget and total project budget were revised back to the planning allocation levels while the university works to reach final market pricing.
4. This project will plan the renovation of three academic buildings located in the core of main campus bordering the Drillfield: Davidson Hall-Front Section, Sandy Hall, and the Liberal Arts Building. Preliminary Design work is underway. The funding plan calls for the university to temporarily support planning costs with nongeneral funds which will be reimbursed by the state once construction funding is released. The project is scheduled to be ready for construction funding by fall 2014, and the university requested construction funding for fiscal year 2015. If construction funding is not included in this budget, the start of construction may be delayed until fiscal year 2016.
5. This project will plan a facility to accommodate the practice needs of the Marching Virginians. The project envisions three components: a facility, a covered open air pavilion, and an artificial turf field. Planning work is underway for the building components and sitework is underway for the field component. Pending authorization for construction at the March 2014 Board of Visitors meeting, the project is on schedule for completion of the field by the opening of fall 2014 classes and completion of the building elements by spring 2015.
6. The instructional components of the Dairy Science program are being relocated to Kentland through a project with the Virginia Tech Foundation. This project is for preplanning the relocation of six remaining agricultural facilities with three new facilities. The new facilities include a metabolism research laboratory, an applied reproduction facility, and a building for animal demonstration, handling, and holding spaces. The funding plan calls for the university to temporarily support planning costs with nongeneral funds which will be reimbursed by the state once construction funding is released. The university requested funding for full planning and construction in the fiscal year 2015 budget.
7. This project is for a 93,860 gross square foot building to provide modern laboratory space to meet the needs of animal and plant science research. Substantial completion was achieved in December 2013, the building is occupied, and the project will enter the close-out phase. The annual budget was adjusted in the second quarter to reflect expected cash outflows for fiscal year 2014, and resources are sufficient to cover the accelerated flow.
8. This project includes construction of a state-of-the-art performance theatre, creative technologies laboratory, and creative performance laboratory. The project is occupied and is entering the close-out phase.
9. This project razes and replaces the unrecoverable center and north section of the building. Construction is underway and substantial completion has been extended to May 2014 from December 2013. The delay may result in cost overruns which the university is working to resolve with the contractor.
10. This project is for a 154,900 gross square foot classroom and laboratory facility for undergraduate and research programs in the College of Engineering. Construction is underway and substantial completion has been extended to May 2014 from January 2014. The time extension is not expected to cause a cost overrun.
11. The project is complete and has been occupied since August 2012. The project remains open while the university works to address odor dispersion concerns from occupants of adjacent buildings. The project may be closed and financial accounts terminated when completion of the authorized scope has been verified by the Chief Facilities Officer. The annual budget was adjusted in the first quarter because expenses planned for fiscal year 2013 will be processed in fiscal year 2014.
12. The project is complete and has been occupied since July 2013. The project may be closed and financial accounts terminated when completion of the authorized scope has been verified by the Chief Facilities Officer. The annual budget was adjusted in the first quarter to reflect expected cash outflows for fiscal year 2014.
13. This is a subproject of a Blanket Authorization, which allows unforeseen small projects to be authorized administratively with nongeneral funds for expediency. This project includes a \$3.5 million authorization to initiate planning for a Sciences Laboratory Building that has been on hold.

**CAPITAL OUTLAY PROJECTS
AUTHORIZED AS OF DECEMBER 31, 2013**

Dollars in Thousands

	CURRENT YEAR			TOTAL PROJECT BUDGET					
	ORIGINAL ANNUAL BUDGET	REVISED ANNUAL BUDGET	YTD EXPENSES	STATE SUPPORT	GENERAL OBLIGATION BOND	NONGENERAL FUND	REVENUE BOND	TOTAL BUDGET	CUMULATIVE EXPENSES
Educational and General Projects									
<u>Educational and General Maintenance Reserve</u>									
Maintenance Reserve	6,723	7,403	4,078	13,427	0	0	0	13,427	8,088 (1)
<u>Design Phase</u>									
Address Fire Alarm Systems and Access	1,500	1,500	92	5,501	0	0	0	5,501	270 (2)
Classroom Building	10,000	965	452	0	0	2,000	0	2,000	1,487 (3)
Planning: Academic Buildings Renewal	1,348	1,348	603	0	0	1,389	0	1,389	603 (4)
Planning: Marching Virginians Practice Facility	0	400	40	0	0	1,200	0	1,200	40 (5)
Preplanning: Improve Kentland Facilities	152	152	0	0	0	1,500	0	1,500	0 (6)
<u>Construction Phase</u>									
Human & Agricultural Biosciences Building I	9,500	15,000	10,865	53,759	0	0	0	53,759	47,703 (7)
Performing Arts Center	14,187	14,187	12,815	27,387	0	32,565	40,135	100,087	93,592 (8)
Renovate Davidson Hall, Phase I	9,719	9,719	7,120	31,119	0	0	0	31,119	26,547 (9)
Signature Engineering Building	16,000	16,000	10,301	47,609	0	18,650	28,959	95,218	66,492 (10)
<u>Close-Out</u>									
Academic and Student Affairs Building	0	1,989	282	0	0	0	45,153	45,153	43,446 (11)
Chiller Plant, Phase I	1,598	2,435	1,824	12,059	0	400	7,639	20,098	19,487 (12)
<u>On Hold and Not Funded</u>									
Blanket: E&G Research Projects	0	0	0	0	0	3,500	0	3,500	547 (13)
Sciences Building Laboratory I	10,000	0	0	0	0	0	0	0	0 (14)
TOTAL	80,727	71,098	48,471	190,861	0	61,204	121,886	373,951	308,301

Capital Outlay Projects Authorized as of December 31, 2013 (Continued)

Dollars in Thousands

	CURRENT YEAR			TOTAL PROJECT BUDGET					
	ORIGINAL ANNUAL BUDGET	REVISED ANNUAL BUDGET	YTD EXPENSES	STATE SUPPORT	GENERAL OBLIGATION BOND	NONGENERAL FUND	REVENUE BOND	TOTAL BUDGET	CUMULATIVE EXPENSES
Auxiliary Enterprises Projects									
<u>Auxiliary Maintenance Reserve</u>									
Maintenance Reserve	6,400	6,400	4,183	0	0	17,161	0	17,161	4,183 (1)
<u>Design Phase</u>									
Indoor Athletic Training Facility	0	500	151	0	0	500	24,500	25,000	159 (2)
<u>Construction Phase</u>									
Campus Fiber Optic Improvement	492	492	279	0	0	2,000	0	2,000	1,549 (3)
Unified Communications & Network Renewal	1,920	1,920	627	0	0	4,500	12,008	16,508	9,017 (4)
Upper Quad Residential Facilities	5,795	5,795	3,262	0	0	5,850	84,150	90,000	3,266 (5)
<u>Close-Out</u>									
Phase IV of Oak Lane Community (House 1)	996	1,302	1,179	0	0	6,002	0	6,002	5,880 (6)
Repair McComas Hall Exterior Wall Structure, Ph III	510	269	241	0	0	3,375	0	3,375	3,348 (7)
<u>On Hold and Not Funded</u>									
New Residence Hall II	0	0	0	0	0	0	27,000	27,000	182 (8)
Parking Blanket Authorizations Balance	0	0	0	0	0	0	16,547	16,547	0 (9)
Phase IV of Oak Lane Community (Houses 2 - 5)	0	0	0	0	0	0	17,498	17,498	0 (10)
TOTAL	16,113	16,678	9,922	0	0	39,388	181,703	221,091	27,584
GRAND TOTAL	<u>\$ 96,840</u>	<u>\$ 87,776</u>	<u>\$ 58,393</u>	<u>\$ 190,861</u>	<u>\$ -</u>	<u>\$ 100,592</u>	<u>\$ 303,589</u>	<u>\$ 595,042</u>	<u>\$ 335,884</u>

RECOMMENDATION:

That the report of income and expenditures for the University Division and the Cooperative Extension/Agricultural Experiment Station Division for the period of July 1, 2013 through December 31, 2013 and the Capital Outlay report be accepted.

March 24, 2013

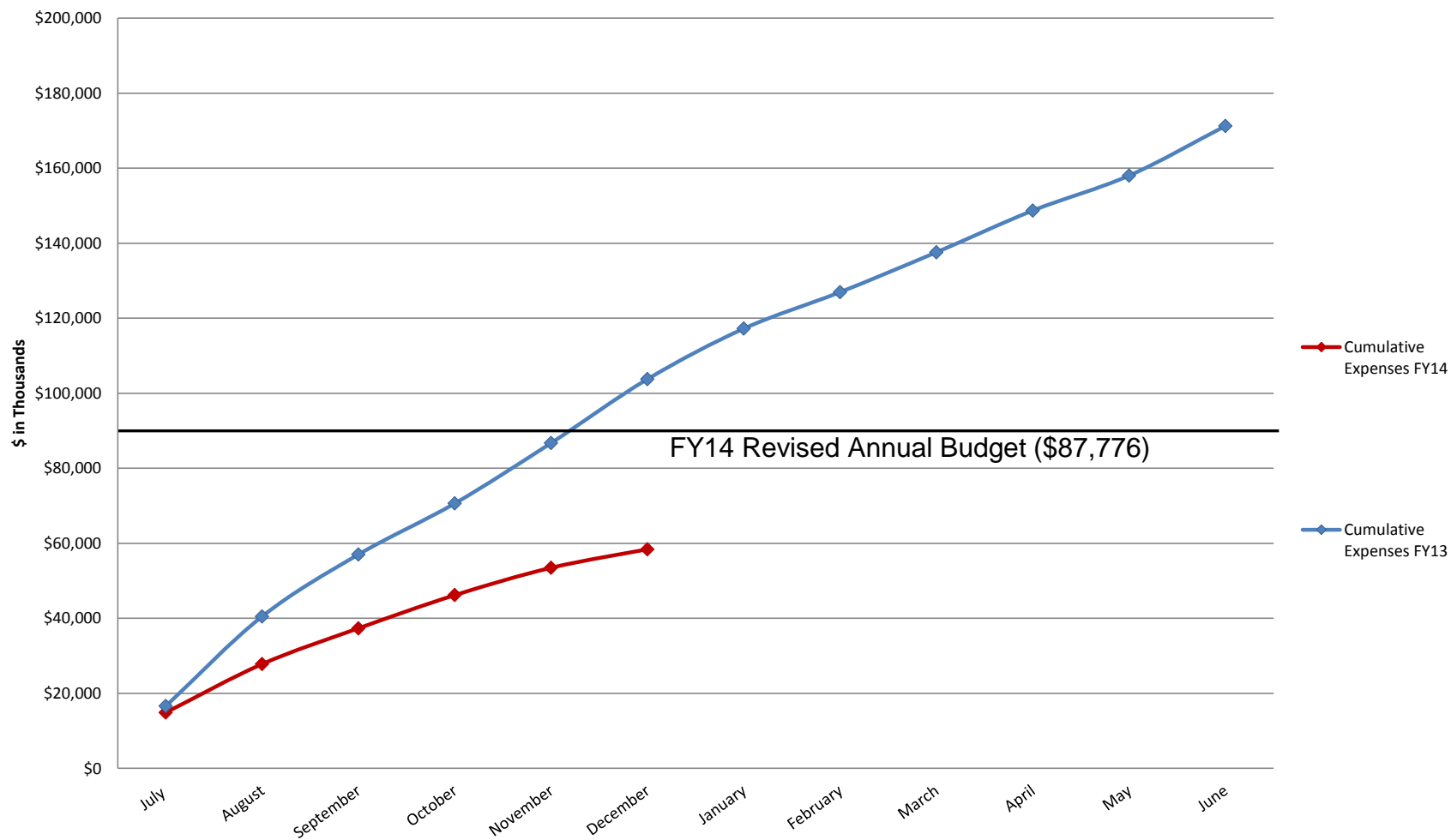
CAPITAL OUTLAY BUDGET (Continued)

14. This project is envisioned to provide an 80,000 gross square foot scientific laboratory facility to support interdisciplinary instruction and research. The proposed total project budget is \$46.45 million including \$31.45 million of General Fund and \$15 million of nongeneral fund. The original annual budget of \$10 million reflected an anticipated allocation of General Fund resources in late fiscal year 2013. The state's capital funding pool did not include the project, and the university is working with the state on the potential of General Fund resources to implement the project. Thus, the annual budget and total project budget were adjusted back to zero pending the timing of state funding. If funding is not included in the fiscal year 2015 budget, the project may need to be resubmitted for review and approval.

Auxiliary Enterprises Projects

1. Projects are scheduled and funded by the auxiliary enterprises during the annual Auxiliary Enterprise budgeting process. The units prepare five-year plans that outline their highest priority deferred maintenance needs. The annual budget reflects the spending plans of the auxiliary units on scheduled maintenance reserve work for fiscal year 2014. The outstanding balance is committed to a five year forward looking maintenance plan to ensure sufficient resources are available for major maintenance repairs. The auxiliary maintenance reserve program covers 93 assets with a total replacement value of \$1 billion. The outstanding balance of the Total Project Budget is for maintenance reserve work scheduled for fiscal year 2014 and beyond.
2. The purpose of this project is to build a new field house to increase the availability of indoor training time for the football program and other athletic programs. The target total project costs are \$18 million. A site for the new facility has been selected and the intended delivery method is Design-Build. The desired schedule is to complete selection of a Design-Build team in early March 2014. Pending completion of private fund raising, the desired schedule to initiate construction activity is July 2014 with completion in August 2015. The annual budget was adjusted in the first quarter to reflect initiating planning activity.
3. This project includes installation of a new fiber-optic core on campus to update the communication system. The total expected costs are \$2 million, and this project is anticipated to be substantially complete in spring 2014.
4. This project includes improvements to four complementary communication infrastructure components. The four components include a unified communications system, upgrading the Internet Protocol (IP) Network, upgrading the cable plant, and upgrading equipment rooms in various facilities. The total expected costs are \$16.508 million, and this project is anticipated to be complete in fall 2016.
5. This project replaces Rasche and Brodie with two new residential facilities and razes Thomas and Monteith. The total budget is \$90 million, and this project is anticipated to be complete by fall semester 2017 based on an anticipated four year construction schedule.
6. The subproject is complete, the house is occupied, and the financial accounts will be closed when final payments are processed. The subproject was delivered under a Public-Private Partnership Agreement. The private partner exceeded the house component of the budget by \$1.06 million and agreed to fund the entire overrun with private sources. The total budget for this subproject was increased to \$6.002 million accordingly.
7. This project is complete and may be closed and financial accounts closed when completion of the authorized scope has been verified by the Chief Facilities Officer. The total expected costs are \$3.375 million.
8. This project envisioned a new residence hall of approximately 250 beds. Cost estimates exceed the project budget and the project is on hold while the university explores alternatives. Funding for the project may be considered pending a program plan and financial plan.
9. The purpose of this unfunded parking blanket authorization balance is to complete future improvements and repair projects for the parking system as specific needs are identified and as funding becomes available.
10. This is the remaining unallocated authorization of the original \$23.5 million Oak Lane Community, Phase IV project. The outstanding Oak Lane Community expansion, houses two through five and their necessary site improvements, may be constructed as organizations come forward with plans and commitments for their one-third funding requirement per house.

CAPITAL PROGRAM ANNUAL PERFORMANCE
Cumulative Monthly Expenditures
Fiscal Year 2013 and Fiscal Year 2014



2014-15 Compensation for Graduate Assistants

FINANCE AND AUDIT COMMITTEE

February 25, 2014

Background

Graduate students who work as graduate assistants while pursuing their master's or doctoral degrees provide a valuable service to the university. Many teach undergraduate classes while others support faculty in scholarly and sponsored research activities. To be competitive in the recruitment and retention of high quality graduate students, it is important for the university to provide compensation packages that are comparable with those offered by peer institutions. The key components of the total compensation package are a stipend, tuition assistance, and health insurance benefit.

Graduate Stipends

One of the primary goals of Virginia Tech during the 1980's was to build a graduate compensation program that was competitive with those offered by comparable institutions. A stipend table was developed that defines ranges of stipend amounts to provide campus with flexibility in compensating graduate assistants based on varied responsibilities of graduate students across the many academic and administrative units on campus. These levels have been adjusted over the years to remain competitive.

To respond to increasing competition for quality graduate students among peer institutions, the graduate student stipend scale was revised for Fall 2003 and approved by the Board of Visitors to better position Virginia Tech departments and to reflect the minimum stipend levels authorized by the National Science Foundation. The Fall 2004 stipend scale added 10 additional stipend steps, numbered 41-50, to increase the university's competitive position in attracting outstanding Ph.D. students. In 2004-05, the graduate stipend scale was enhanced to function as 50 pay ranges to provide flexibility for situations where a defined level of resource does not exactly match one of the steps, so that the actual stipend may be established within the range of a step.

In 2011-12, an academic year fixed dollar supplement was added to the graduate stipend scale to help offset university assigned costs such as the health fee. As a result, the graduate assistant stipend is currently comprised of two components: 1) a base stipend and 2) a fixed supplement. For administrative efficiency and processing, the two components are combined into the traditional stipend scale. As of January 2014, the current average monthly stipend for full-time graduate assistants is \$1,842 per month, which falls within step 12 of the 2013-14 scale.

Tuition Assistance

In the 1990's, the university developed a more comprehensive program of tuition scholarships for graduate students. Four sources finance the tuition program: the General Fund appropriation for graduate student financial assistance, a scholarship program in the Educational and General budget, tuition payments planned in the budgets of grants and contracts, and private funds. The tuition remission program for graduate students on assistantship, including the remission of tuition, mandatory E&G fees (excluding the Commonwealth Capital and Equipment Fee), and non-executive graduate program fees.

Health Insurance

At the March 2001 meeting of the Board of Visitors, a health insurance program for graduate students on assistantship was approved as a part of the graduate student compensation package to enhance the university's competitiveness in recruiting highly qualified graduate students. The program was designed to help full-time graduate students receiving a full or partial assistantship, including graduate research assistants, graduate teaching assistants, and graduate assistants, offset a portion of the cost of health insurance premiums. In 2009-10 university management worked with representatives of the graduate student community to review and improve the overall mix and value of benefits provided through the health insurance program; these enhancements were approved by the Board and included in the program for 2010-11. In 2011-12, the university reached the goal of supporting 90 percent of the graduate health insurance program.

In order to qualify for health insurance, full-time graduate students must have a 50 percent or greater appointment. Graduate students also have the option to decline coverage if they so choose. In 2013-14, the university provided 90 percent of the \$1,798 annual premium cost of the Basic Plan, which provided a \$300 annual deductible, a \$1,500 out-of-pocket maximum, a \$25 co-pay for doctors' visits (\$10 with a Schiffert Health Center referral), and a \$500,000 maximum benefit. Students can obtain optional dental benefits for an additional cost.

To transition towards the Federal Affordable Care Act, the university moved to a single \$500,000 maximum coverage level in fiscal year 2014. Due to the implementation of the Affordable Care Act, beginning in fiscal year 2015 the student health insurance program will not have an annual maximum benefit level. The university expects to experience a cost increase for fiscal year 2015 due to this change in coverage and other inflationary factors.

Proposed Graduate Assistant Compensation Plan for 2014-15

The university proposes the following actions for fiscal year 2014-15:

- advancing the stipend scale for 2014-15 by providing a base stipend increase of 2 percent, effective August 10, 2014, to encompass the options currently under consideration by the General Assembly.
- enhancing the total stipend by increasing the academic year stipend supplement of \$300 by \$100, for a total academic year supplement of \$400 to help mitigate university assigned costs as well as other related costs incurred by graduate students on assistantship.

Consistent with prior years, the proposed minimum and maximum stipends, including the stipend supplement, for a full assistantship are displayed on the attached table.

- continuing the graduate assistant health insurance coverage at 90 percent, based upon the university's current estimate of the cost increase.

RECOMMENDATION

That the graduate assistant compensation program for 2014-15 be approved.

2014-15 Full-Time Graduate Monthly Stipend Compensation
Effective August 10, 2014

2014-15

Step	Components			Total Stipend					
	Monthly Base		AY Supplement	Monthly		9 Month		12 Month	
Step 1	\$ 1,316	- \$ 1,316	\$400	\$ 1,360	- \$ 1,360	\$ 12,240	- \$ 12,240	\$ 16,320	- \$ 16,320
Step 2	1,317	- 1,369	\$400	1,361	- 1,413	12,249	- 12,717	16,332	- 16,956
Step 3	1,370	- 1,419	\$400	1,414	- 1,463	12,726	- 13,167	16,968	- 17,556
Step 4	1,420	- 1,469	\$400	1,464	- 1,513	13,176	- 13,617	17,568	- 18,156
Step 5	1,470	- 1,519	\$400	1,514	- 1,563	13,626	- 14,067	18,168	- 18,756
Step 6	1,520	- 1,572	\$400	1,564	- 1,616	14,076	- 14,544	18,768	- 19,392
Step 7	1,573	- 1,621	\$400	1,617	- 1,665	14,553	- 14,985	19,404	- 19,980
Step 8	1,622	- 1,674	\$400	1,666	- 1,718	14,994	- 15,462	19,992	- 20,616
Step 9	1,675	- 1,723	\$400	1,719	- 1,767	15,471	- 15,903	20,628	- 21,204
Step 10	1,724	- 1,775	\$400	1,768	- 1,819	15,912	- 16,371	21,216	- 21,828
Step 11	1,776	- 1,824	\$400	1,820	- 1,868	16,380	- 16,812	21,840	- 22,416
Step 12	1,825	- 1,873	\$400	1,869	- 1,917	16,821	- 17,253	22,428	- 23,004
Step 13	1,875	- 1,926	\$400	1,919	- 1,970	17,271	- 17,730	23,028	- 23,640
Step 14	1,927	- 1,976	\$400	1,971	- 2,020	17,739	- 18,180	23,652	- 24,240
Step 15	1,977	- 2,027	\$400	2,021	- 2,071	18,189	- 18,639	24,252	- 24,852
Step 16	2,028	- 2,077	\$400	2,072	- 2,121	18,648	- 19,089	24,864	- 25,452
Step 17	2,078	- 2,128	\$400	2,122	- 2,172	19,098	- 19,548	25,464	- 26,064
Step 18	2,129	- 2,180	\$400	2,173	- 2,224	19,557	- 20,016	26,076	- 26,688
Step 19	2,181	- 2,230	\$400	2,225	- 2,274	20,025	- 20,466	26,700	- 27,288
Step 20	2,231	- 2,280	\$400	2,275	- 2,324	20,475	- 20,916	27,300	- 27,888
Step 21	2,282	- 2,332	\$400	2,326	- 2,376	20,934	- 21,384	27,912	- 28,512
Step 22	2,333	- 2,380	\$400	2,377	- 2,424	21,393	- 21,816	28,524	- 29,088
Step 23	2,381	- 2,431	\$400	2,425	- 2,475	21,825	- 22,275	29,100	- 29,700
Step 24	2,432	- 2,483	\$400	2,476	- 2,527	22,284	- 22,743	29,712	- 30,324
Step 25	2,484	- 2,534	\$400	2,528	- 2,578	22,752	- 23,202	30,336	- 30,936
Step 26	2,535	- 2,583	\$400	2,579	- 2,627	23,211	- 23,643	30,948	- 31,524
Step 27	2,584	- 2,637	\$400	2,628	- 2,681	23,652	- 24,129	31,536	- 32,172
Step 28	2,638	- 2,686	\$400	2,682	- 2,730	24,138	- 24,570	32,184	- 32,760
Step 29	2,687	- 2,736	\$400	2,731	- 2,780	24,579	- 25,020	32,772	- 33,360
Step 30	2,737	- 2,788	\$400	2,781	- 2,832	25,029	- 25,488	33,372	- 33,984
Step 31	2,789	- 2,837	\$400	2,833	- 2,881	25,497	- 25,929	33,996	- 34,572
Step 32	2,838	- 2,888	\$400	2,882	- 2,932	25,938	- 26,388	34,584	- 35,184
Step 33	2,890	- 2,939	\$400	2,934	- 2,983	26,406	- 26,847	35,208	- 35,796
Step 34	2,940	- 2,990	\$400	2,984	- 3,034	26,856	- 27,306	35,808	- 36,408
Step 35	2,991	- 3,040	\$400	3,035	- 3,084	27,315	- 27,756	36,420	- 37,008
Step 36	3,041	- 3,091	\$400	3,085	- 3,135	27,765	- 28,215	37,020	- 37,620
Step 37	3,092	- 3,142	\$400	3,136	- 3,186	28,224	- 28,674	37,632	- 38,232
Step 38	3,143	- 3,193	\$400	3,187	- 3,237	28,683	- 29,133	38,244	- 38,844
Step 39	3,194	- 3,245	\$400	3,238	- 3,289	29,142	- 29,601	38,856	- 39,468
Step 40	3,246	- 3,294	\$400	3,290	- 3,338	29,610	- 30,042	39,480	- 40,056
Step 41	3,295	- 3,347	\$400	3,339	- 3,391	30,051	- 30,519	40,068	- 40,692
Step 42	3,348	- 3,396	\$400	3,392	- 3,440	30,528	- 30,960	40,704	- 41,280
Step 43	3,397	- 3,446	\$400	3,441	- 3,490	30,969	- 31,410	41,292	- 41,880
Step 44	3,447	- 3,498	\$400	3,491	- 3,542	31,419	- 31,878	41,892	- 42,504
Step 45	3,499	- 3,547	\$400	3,543	- 3,591	31,887	- 32,319	42,516	- 43,092
Step 46	3,548	- 3,601	\$400	3,592	- 3,645	32,328	- 32,805	43,104	- 43,740
Step 47	3,602	- 3,649	\$400	3,646	- 3,693	32,814	- 33,237	43,752	- 44,316
Step 48	3,650	- 3,701	\$400	3,694	- 3,745	33,246	- 33,705	44,328	- 44,940
Step 49	3,702	- 3,751	\$400	3,746	- 3,795	33,714	- 34,155	44,952	- 45,540
Step 50	3,752	- 3,802	\$400	3,796	- 3,846	34,164	- 34,614	45,552	- 46,152

Capital Project for Constructing the Marching Virginians Practice Facility

JOINT FINANCE AND AUDIT COMMITTEE AND BUILDINGS AND GROUNDS COMMITTEE

February 12, 2014

In September 2013, the Board of Visitors approved a \$400,000 planning project for the Marching Virginians Practice Facility. The overall project scope includes an approximately 4,350 gross square foot building, a minimum 4,050 gross square foot outdoor covered pavilion attached to the main building, and a soccer-size artificial turf field with lighting. The field associated with this project will also be used for recreational club sports activities. In November 2013, the Board of Visitors approved an additional \$800,000 authorization to begin early sitework for the project to accommodate the desired date for use of the practice field component during 2014 fall semester classes. This date is ahead of the building desired use date of early 2015.

The grading and sitework design are underway with field construction scheduled for completion this fall. The building components are in the preliminary design phase with an expected construction start in May 2014 for the main building and covered pavilion. The project delivery method for the building construction will be Design-Bid-Build with occupancy expected in early 2015.

As with all self-supporting projects, the university has developed a financing plan to support the project. The university worked conjointly with the College of Liberal Arts and Human Sciences, Recreational Sports, and Athletics on a collaborative shared use and funding plan to support this project. The total project budget is \$4.75 million, and the funding plan is sufficient to cover this amount.

Under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has the authority to approve the budget, size, scope, and funding of nongeneral fund capital outlay projects. This request is for a \$3.55 million authorization supplement to the existing \$1.2 million planning and sitework to complete the new Marching Virginians Practice Facility. The total project budget will be \$4.75 million.

RESOLUTION ON CAPITAL PROJECT FOR CONSTRUCTING THE MARCHING VIRGINIANS PRACTICE FACILITY

WHEREAS, the Board of Visitors approved a \$400,000 planning project for the Marching Virginians Practice Facility in September 2013; and,

WHEREAS, the Board of Visitors approved an \$800,000 supplement to begin grading and sitework for the Marching Virginians Practice Facility in November 2013; and,

WHEREAS, the project scope includes an approximately 4,350 gross square foot building, a minimum 4,050 gross square foot outdoor covered pavilion attached to the main building, and, a soccer-size artificial turf field with lighting; and,

WHEREAS, the desired date for use of the practice field component is the opening of classes, fall semester 2014; and,

WHEREAS, planning work is underway for the main building and covered pavilion with an expected construction start in May 2014 and expected completion date in summer 2015; and,

WHEREAS, the total project budget is \$4.75 million, including this supplement request of \$3.55 million; and,

WHEREAS, the university has developed a 100 percent nongeneral fund resource plan for the project; and,

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has authority to approve the budget, size, scope, and funding of nongeneral funded major capital outlay projects; and,

WHEREAS, the university may address minor cost variances provided sufficient funds are available to support the full project costs;

NOW THEREFORE BE IT RESOLVED, that the university be authorized to move forward with a \$3.55 million authorization supplement for construction of the Marching Virginians Practice Facility funded entirely with nongeneral fund revenues.

RECOMMENDATION:

That the resolution authorizing Virginia Tech to construct the Marching Virginians Practice Facility be approved.

March 24, 2014

Capital Project for Planning the Health Center Improvements

JOINT FINANCE AND AUDIT COMMITTEE AND BUILDINGS AND GROUNDS COMMITTEE

February 12, 2014

McComas Hall was completed in 1998 with 118,225 gross square feet to house Recreation Sports in its west wing and the Schiffert Health Center and the Cook Counseling Center in its east wing. In 2006, the Board of Visitors and the Commonwealth approved a request by the university to construct a \$13 million addition to McComas Hall for additional recreation, clinical, and counseling space. During design in late 2008, cost estimates for the project scope exceeded the authorized budget and available resources. To manage the budget, the scope of the recreation component was implemented. The counseling program needs were absorbed into the building, and the clinical component was deferred until sufficient resources were identified to support additional improvements.

The addition for the recreation component was completed in 2010; however, the 16,000 assignable square feet of the Schiffert Health Center remain inadequate to support the service needs of the university's students. The density of students at the Center creates cramped conditions that result in privacy, confidentiality, treatment, and access concerns for students and medical staff. Beyond the space needs of the Health Center, the university's Campus Alcohol Abuse Prevention Center (CAAPC) does not have a permanent location to deliver its programs. Prevention of alcohol abuse is a high priority for the university, and the program is currently located in a make-shift room in War Memorial Hall that does not adequately support its mission and is not strategically located for program delivery.

The solution proposed by the Student Health Program and supported by the Vice President for Student Affairs and by the university is to construct a one story addition to the east wing of McComas Hall and to renovate an interior portion of the existing Schiffert Health Center. Overall, the 4,700 gross square foot project would include 3,000 gross square feet of new space and 1,700 gross square feet of renovation work. This solution is consistent with the program originally approved by the Board of Visitors and the Commonwealth in 2006.

The new addition would relocate the Campus Alcohol Abuse and Prevention Center and include infirmary space for the Schiffert Health Center. Relocating the Campus Alcohol Abuse Prevention Center to McComas Hall would allow for better coordination of prevention and treatment services with the Schiffert Health Center and the Cook Counseling Center. The new infirmary would allow students to be treated in a space separate from wound care and Methicillin-resistant *Staphylococcus Aureus* (MRSA) treatment. The new infirmary may also serve as an isolation area should that be needed, and its negative pressure room could allow Schiffert Health Center to handle highly contagious cases and assist with emergency preparedness.

Renovating a portion of the existing Schiffert Health Center would create three intake rooms from the old laboratory. The laboratory would be relocated to the old wound care/treatment room. The relocated laboratory space would better support existing equipment and improve the layout and functionality of the space. Existing rooms would be repurposed into a

phlebotomy area, an orthopedic room, a nebulizer room, and a dietitian's office. A biohazard waste storage space would be created to separately store and secure that type of material.

As with all self-supporting projects, the university has developed a financing plan to support the project and provide assurance regarding its financial feasibility. This funding plan calls for the use of debt which may be serviced from Student Health auxiliary revenue. The target total project budget is \$2.868 million and annual debt service is estimated to be \$234,000. The funding plan for debt service calls for the redirection of existing student fee revenues when debt on the original McComas Hall project is retired in 2016. Thus, student fees will not be increased for this project and the revenue source will be sufficient to cover this amount.

Under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has the authority to approve the budget, size, scope, debt issuance, and overall funding of nongeneral fund capital outlay projects. The university's 2014-2020 Six-Year Capital Outlay Plan approved by the Board of Visitors at its September 9, 2013 meeting includes a nongeneral fund project for a Health Center Improvements project. This request is for a \$200,000 planning authorization for the Health Center Improvements project. A subsequent request for construction funding may be submitted after designs are underway and a firm scope and cost are determined.

RESOLUTION ON CAPITAL PROJECT FOR PLANNING THE HEALTH CENTER IMPROVEMENTS

WHEREAS, the Schiffert Health Center is no longer adequate to support the service needs of the university's students and the cramped condition creates privacy, confidentiality, treatment, and access concerns for students and medical staff; and,

WHEREAS, the university's Campus Alcohol Abuse Prevention Center (CAAPC) does not have a permanent location to deliver its programs; and,

WHEREAS, the proposed solution is to construct a one story addition to the east wing of McComas Hall and to renovate an interior portion of the Schiffert Health Center; and,

WHEREAS, the 4,700 gross square foot project would include 3,000 gross square feet of new space and 1,700 gross square feet renovation work; and,

WHEREAS, the university has developed a 100 percent nongeneral fund resource plan for the project, including this \$200,000 of planning work; and,

WHEREAS, the funding plan includes the use of debt which may be serviced from the Student Health auxiliary revenue; and,

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the university has the authority to issue bonds, notes or other obligations that do not constitute State tax supported debt; and,

WHEREAS, the Finance and Audit Committee will further review and approve a financing resolution prior to securing permanent financing for the debt component of the project plus amounts needed to fund issuance costs, reserve funds, and other financing expenses; and,

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has authority to approve the budget, size, scope, debt issuance, and overall funding of nongeneral funded major capital outlay projects; and,

WHEREAS, the university may address minor cost variances provided sufficient funds are available to support the full project costs;

NOW, THEREFORE BE IT RESOLVED, that the university be authorized to move forward with a \$200,000 planning authorization for the Health Center Improvements project and to secure temporary short-term financing through any borrowing mechanism that prior to such borrowing has been approved by the Board, as applicable, in an aggregate principal amount not to exceed the \$200,000 planning authorization, plus related issuance costs and financing expenses.

RECOMMENDATION:

That the resolution authorizing Virginia Tech to design the Health Center Improvements project be approved.

March 24, 2014

Capital Project for Planning the South Recreation Field Surface Replacement

JOINT FINANCE AND AUDIT COMMITTEE AND BUILDINGS AND GROUNDS COMMITTEE

February 12, 2014

Intramural and club sports are high demand programs with approximately 10,000 of the university's students participating in various programs. Of the 10,000, approximately 6,300 participate in programs conducted on the south recreation field area which is located off Tech Center Drive. The existing field area is approximately nine acres of natural turf arranged into four softball fields and four multi-purpose fields that may accommodate flag football, soccer, or ultimate Frisbee.

The natural turf is subject to deterioration with intensive use. Recreational Sports rotates field use in an effort to preserve the fields for a full season of play; however, this practice constrains available schedule time which curtails the number of teams that may be accommodated for a season. The natural turf can sustain a limit of approximately 2,000 games per year. The Recreation program currently turns away up to 100 requests for teams for flag football and soccer because of the amount of use the natural turf fields may sustain during a season. Intensifying normal deterioration from sports use, inclement weather significantly advances deterioration and causes game cancellations and shortened seasons because of wet fields. The Recreational Sports program cancelled 160 games in 2013 because of weather-related field conditions, including much of the championship game series. Beyond the normal limitations of natural turf described above, the anticipated extension of the airport runway will consume a portion of the existing fields which will limit the opportunity to rotate fields, further reducing the amount of students and teams that may participate in intramural programs.

In 2009, to address the impacts of deterioration, weather, and the loss of field space to the runway and meet the expectations of the students, the Recreational Sports program proposed a capital project solution to replace the remaining natural turf with a synthetic turf. The proposal is to create a multi-purpose area that may be arranged as six flag football fields, or six soccer fields, or four 300-foot softball fields. The south recreation field area would be fenced and lit. A nine foot asphalt path would be constructed around the field to allow for maintenance vehicle traffic and to create a jogging/walking path. Converting the south recreation field to artificial turf would allow Recreational Sports to meet current student expectations. More teams could participate in intramural and club sports, fewer games would be lost because of inclement weather, and full sports seasons would be completed. Further, students will have a place to practice during the beginning of spring semester which is currently not possible because of the effects of winter weather on the natural turf fields. Finally, Recreational Sports may be able to meet demand for additional sports requested by students that currently cannot be met because of the usage limit of the natural turf.

The 2009 project proposal was included in the Six-Year Capital Outlay Plan approved by the Board of Visitors in June 2011 and has been carried into the current plan approved by the Board in September 2013. As with all self-supporting projects, the university has developed

a financing plan to support the project and provide assurance regarding its financial feasibility. The target total project budget is \$4.6 million and annual debt service is estimated to be \$380,000. The timing of the project request has been coordinated with the 2016 retirement of debt for the original construction of McComas Hall. The funding plan for debt service calls for the redirection of existing Recreational Sports student fee revenues when debt on the original McComas Hall project retires. Thus, student fees will not be increased for this project and the revenue source is sufficient to cover this amount.

Under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has the authority to approve the budget, size, scope, debt issuance, and overall funding of nongeneral fund capital outlay projects. The university's 2014-2020 Six-Year Capital Outlay Plan approved by the Board of Visitors at its September 9, 2013 meeting includes a nongeneral fund project for the South Recreation Field Replacement. This request is for a \$230,000 planning authorization for the South Recreation Field Replacement project. A subsequent request for construction funding may be submitted after designs are underway and a firm scope and cost are determined.

RESOLUTION ON CAPITAL PROJECT FOR PLANNING THE SOUTH RECREATION FIELD SURFACE REPLACEMENT

WHEREAS, approximately 6,300 students participate in intramural and club sports annually on the South Recreation Field area; and,

WHEREAS, the existing South Recreation Field area is nine-acres of natural turf that cannot support student demand for teams of existing sports and is subject to inclement weather that results in cancelled games and shortened seasons; and,

WHEREAS, the anticipated extension of the airport runway will consume a portion of the existing fields which will further reduce the number of students that may participate in recreation programs; and,

WHEREAS, the proposed project would replace the natural turf field with a synthetic turf field, install lighting and fencing around the fields, and install an asphalt path around the field area to allow for maintenance vehicle traffic and to provide a jogging/walking path; and,

WHEREAS, the university has developed a 100 percent nongeneral fund resource plan for the project, including this \$230,000 of planning work; and,

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the university has the authority to issue bonds, notes or other obligations that do not constitute State tax supported debt; and,

WHEREAS, the Finance and Audit Committee will further review and approve a financing resolution prior to securing permanent financing for the debt component of the project plus amounts needed to fund issuance costs, reserve funds, and other financing expenses; and,

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has authority to approve the budget, size, scope, debt issuance, and overall funding of nongeneral funded major capital outlay projects; and,

WHEREAS, the university may address minor cost variances provided sufficient funds are available to support the full project costs;

NOW, THEREFORE BE IT RESOLVED, that the university be authorized to move forward with a \$230,000 planning authorization for the South Recreation Field Surface Replacement project and to secure temporary short-term financing through any borrowing mechanism that prior to such borrowing has been approved by the Board, as applicable, in an aggregate principal amount not to exceed the \$230,000 authorization, plus related issuance costs and financing expenses.

RECOMMENDATION:

That the resolution authorizing Virginia Tech to design the South Recreation Field Surface Replacement project be approved.

March 24, 2014

Financing Plan for Capital Project for New Athletic Field House

JOINT FINANCE AND AUDIT COMMITTEE AND BUILDINGS AND GROUNDS COMMITTEE

March 6, 2014

In accordance with the university's 2004-2010 Capital Outlay Plan approved by the Board of Visitors, the university requested in 2005 and the state authorized in 2006 a \$25 million capital outlay project for a new indoor athletic training facility. The scope of the authorization includes 120,000 gross square feet of an athletic field house facility programmed for multipurpose activities and sized to accommodate sufficient length, width, and height necessary for football practice work. The authorized funding plan calls for \$25 million of debt to be repaid entirely by private gifts.

After the state's approval in 2006, the Athletics program requested to temporarily place this project on hold to advance the \$20 million basketball practice facility (authorized 2007) and then the \$14 million football locker room and training facility (authorized 2009). With the completion of the football locker room and training facility in 2011, the Athletics program requested to initiate fund raising activities for the new field house project. To date, \$12.4 million of private support has been raised for project costs with \$7.4 million in cash receipts.

The Athletics program has conducted early planning work, site selection, and identification of a desired Design-Build team for the project. The envisioned facility has an estimated total project cost of \$21.3 million. While the Athletics Department and the University Development Office continue to pursue active prospects to complete the private gift campaign, Athletics has requested to move forward with the project under an interim financing plan until fund raising is complete. The desired goal is to start construction in summer 2014 with occupancy in August 2015.

The financing proposal to move forward includes temporary financing to carry outstanding pledge payments and temporary financing to carry completion of raising the remaining private funds for the project. Because the proposed interim financing plan was not included in the original authorization provided by the Board of Visitors or the state, the university is requesting Board of Visitors approval for the new plan.

This request is for authorization to implement an interim financing plan that includes \$7.4 million of private fund cash, \$5 million of temporary financing to carry payment of existing pledges, and \$8.9 million of temporary financing to carry completion of raising private commitments. The Development Office is confident the outstanding \$5 million of pledge payments will be received within expected payment periods. Further, the Development Office believes the Athletics program has the capacity to raise the additional \$8.9 million of private funds in accordance with the financing plan. If fund raising efforts do not reach the necessary amount of \$21.3 million for the project, the university will obtain permanent financing for the unfunded balance. Any debt not funded by the additional \$8.9 million to be generated through private fund raising will be repaid over time by future self-generated athletics revenues. Until all permanent debt is retired, any outstanding balance of the permanent

financing will be secured by funds in the Athletic Department reserve balance, above and beyond any existing required restrictions. Without this interim financing plan, the project may be delayed a year or more.

Under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has the authority to approve the budget, size, scope, debt issuance, and overall funding of nongeneral fund capital outlay projects. This request is for approval of the revised financing plan to support the full project costs of a \$21.3 million new athletics field house.

RESOLUTION ON FINANCING PLAN FOR CAPITAL PROJECT FOR NEW ATHLETIC FIELD HOUSE

WHEREAS, the state authorized in 2006 a \$25 million capital outlay project for a new indoor athletic training facility with a funding plan that calls for debt to be repaid entirely by private gifts; and,

WHEREAS, the envisioned facility has a project cost of \$21.3 million and the campaign for private support has reached \$12.4 million for project costs; and,

WHEREAS, the Athletics program has requested to move forward with the project under an interim financing plan while the campaign efforts continue to fully fund the project; and,

WHEREAS, without an interim financing plan, the project may be delayed a year or more; and,

WHEREAS, the university has developed a 100 percent nongeneral fund resource plan for the \$21.3 million project, including necessary financing; and,

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the Board of Visitors has authority to approve the budget, size, scope, debt issuance, and overall funding of nongeneral funded major capital outlay projects;

WHEREAS, under the 2006 Management Agreement between the Commonwealth of Virginia and the university, the university has the authority to issue bonds, notes or other obligations that do not constitute State tax supported debt; and,

WHEREAS, the Finance and Audit Committee will further review and approve a financing resolution prior to securing permanent financing for the debt component of the project plus amounts needed to fund issuance costs, reserve funds, and other financing expenses;

NOW, THEREFORE BE IT RESOLVED, that the university be authorized to move forward with a new financing plan to complete a \$21.3 million new athletic field house that includes \$7.4 million of cash available and to secure temporary short-term financing through any borrowing mechanism that prior to such borrowing has been approved by the Board, as applicable, in an aggregate principal amount not to exceed \$13.9 million, plus related issuance costs and financing expenses.

RECOMMENDATION:

That the resolution authorizing Virginia Tech to complete the new Athletics Field House project under the revised financing plan be approved.

March 24, 2014

Committee Minutes

Committee on Research

**Solitude Room
The Inn at Virginia Tech and Skelton Conference Center
4:00-5:30 p.m.**

March 23, 2014

Committee Members Present:

Mr. John Lee, Chair
Dr. Nancy Dye
Mr. John G. Rocovich, Jr.
Mr. Dennis Treacy

Guests:

Dr. Charles Steger, Dr. Timothy Sands, Dr. Mark McNamee, Dr. Robert Walters, Mr. Dwight Shelton Jr., Mr. James L. Chapman, Dr. Mr. William D. Fairchild III, Mr. Cordel L. Faulk, Mr. B. Keith Fulton, Mr. John C. Lee, IV, Ms. Deborah Petrine, Dr. Michael Quillen, Ms. Suzanne Obenshain, Dr. Thomas Ryan, Mr. Stephen Sturgis, Mr. Ralph Byers, Mr. Martin Daniel, Mr. Viet Bien Doung, Mr. Jon Greene, Ms. Natalie Hart, Ms. Kay Heidbreder, Ms. Elizabeth Hooper, Dr. William Knocke, Ms. Sharon Kurek, Dr. Stephen McKnight, Dr. Joseph Merola, Dr. Scott Midkiff, Ms. Kim O'Rourke, Mr. John Pastor, Ms. Sue Teel, Ms.. Erica Wood, Mr. Nick Warrington, Dr. Sherwood Wilson, Mr. Chris Yianilos and Ms. Beth Tranter.

1. **Opening Remarks and Approval of November 17, 2013 Minutes.** Mr. Lee welcomed those in attendance. The minutes were unanimously approved.
2. **Remarks from the President.** Dr. Steger welcomed those in attendance. Dr. Steger also noted that total NSF-reported research expenditures reached more than \$496 million in fiscal year 2013, recognizing the excellence and dedication of the Virginia Tech faculty in achieving this result.
3. **Resolution for the Approval of Appointments to the Virginia Coal and Energy Research and Development Advisory Board:** Dr. Walters reviewed the appointments to the Virginia Coal and Energy Research and Development Advisory Board. The resolution was unanimously approved.
4. **Overview of the Mid-Atlantic Aviation Partnership (Research Initiatives):** Mr. Greene, serves as Associate Director for Strategic Planning and Development for the Institute for Critical Technologies and Applied Science and interim Executive Director of the Mid-Atlantic Aviation Partnership (MAAP). Mr. Greene provided an

overview of the MAAP, led by Virginia Tech in partnership with Rutgers and the University of Maryland, which has been selected as one of six test sites in the nation to be established by the Federal Aviation Administration (FAA) for the safe integration of Unmanned Aerial Vehicles (UAV) into the national airspace. The MAAP represents a strategic partnership with representation from academia, government, industry, economic development agencies and non-profit organizations. This partnership also leverages existing relationships to federal research and development centers for unmanned aerial systems, including William J. Hughes FAA Technical Center, NASA Langley, NASA Wallops, NAVAIR Patuxent River, and the Naval Surface Warfare Center in Dahlgren. This initiative will serve as a considerable asset, supporting Virginia Tech's unique research capabilities in unmanned aerial systems, as well as economic development within the Commonwealth.

5. **Life Cycle of A Sponsored Project (Research Administration):** Ms. Tranter, Chief of Staff for Research, provided an overview of proposal development, award and closeout processes including research administration, budgeting and compliance aspects of research administration.

6. **Adjournment.**

There being no further business, the meeting adjourned at 5:30 p.m.



The Mid-Atlantic Aviation Partnership (MAAP)

The Virginia/New Jersey/Maryland
UAS Test Site



Background

- The FAA Modernization and Reform Act of 2012 required the FAA to establish a program to integrate Unmanned Aircraft Systems (UAS) into the National Air Space at six Test Ranges.
- Virginia/New Jersey/Maryland Team formed summer 2012
- Screening information request (SIR) released by FAA Feb 2013
- Team dissolves into Maryland team and VA/NJ team
- May 2013 proposal submitted
- August 2013: UMD/Rutgers/VT MOA
- Sept 2013: Applied for FACT Fund



- Dec 2013 Awarded FACT Fund Grant:
 - FY 2014: \$1.0M
 - FY 2015: \$1.2M
 - FY 2016: \$0.4M
- Dec 30, 2013 FAA announced UAS Test Site to:
 - University of Alaska
 - State of Nevada
 - Griffiss International Airport (Rome, NY)
 - North Dakota Department of Commerce
 - Texas A&M University—Corpus Christi
 - **Virginia Polytechnic Institute and State University (Virginia Tech)**





Our Team

- Led by Virginia Tech, Rutgers and University of Maryland
- Includes Academia, Government, Industry, Economic Development Agencies and Non-Profit Organizations
- Specific Team strengths:
 - Three universities ranked in U.S. News and World Report top 100
 - Companies w/ experience in UAS development, manufacture, operation and testing
 - Existing relationships to federal UAS R&D centers
 - William J. Hughes FAA Technical Center
 - NASA Langley
 - NASA Wallops
 - NAVAIR Patuxent River
 - NSWC Dahlgren
 - International airport with 10,000' runway





Our Mission

The ***safe and efficient*** integration of Unmanned Aircraft Systems (UAS) into our National Airspace System





Ranges

- Early, high risk flight testing to occur in existing Restricted Areas.
- With demonstrated performance leverage Warning Areas and newly designated Special Activity Airspace
 - Maximum safety to persons and property
 - Full Aviation Infrastructure
 - Adjacent airports/airfields
 - Surveillance Coverage

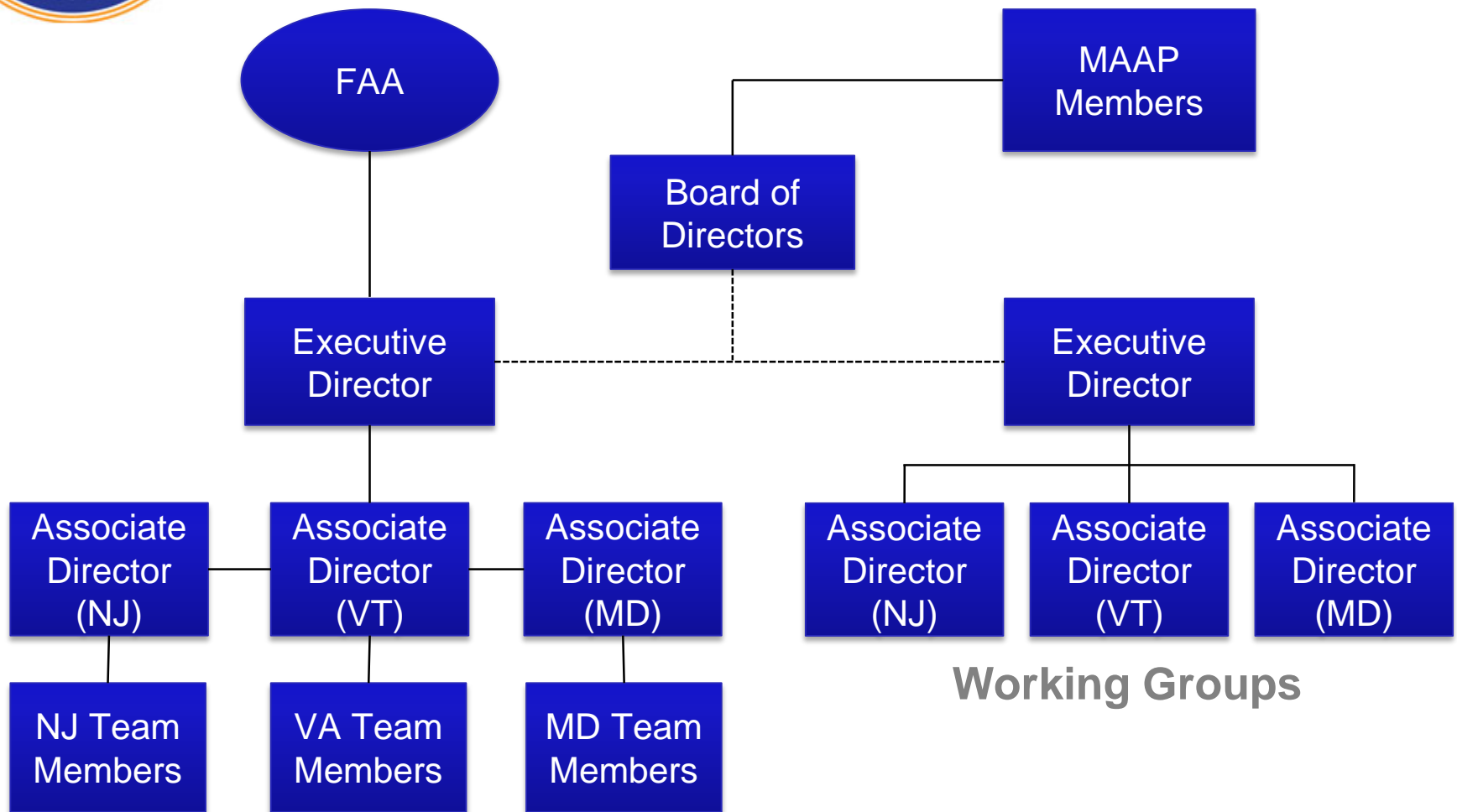


Airspace development ongoing:

- *Maximize safety/Manage risk*
- *Support*
 - *Agricultural applications*
 - *Utility applications*
 - *Emergency Response applications*
 - *Proximity to R and D centers*
 - *Leverage commercial use opportunity*



UAS Test Site/MAAP Organization



UAS TEST SITE

MAAP



Customers

- Federal agencies
- University and other researchers
- Sensor/payload providers*
- UAS manufacturers*
- Operators/users*



*Market dependent on pathway to certification



Challenges

- Stiff competition
- Lack of clear direction
- Success requires collaboration
- Business case
 - Short term—customers?
 - Long term—sustainable funding model





High Priority Activities

1. Hire a “rainmaker” ED
2. Cement our position
3. Assemble core staff
4. Fly early and often (AND FLY SAFELY!)
5. Get the following in place
 - Standard Operating Procedures
 - Test Site COA
6. Procure required equipment
7. Market Aggressively
8. Ensure team members are seeing benefit



Questions?



Life Cycle of a Sponsored Project



Beth Tranter, Chief of Staff, Office of the VP for Research

Overview

- **Why Sponsored Research?**
- **Proposal and Award Processes**
- **Life Cycles of Individual Projects**
- **Sponsor Review Process and Oversight**

Why Sponsored Research?



What is a Sponsored Program?

- Externally-funded research, instruction, outreach.
- Statement of work, unique intellectual expertise required.
- Specific timeline for completion of project.
- Deliverables (i.e., progress report, services, programmatic outcomes. . .)
- Restrictions on the use of funds. Detailed specific budget (allowable, reasonable, allocable).
- Provisions regarding intellectual property.
- Sponsor billed for project costs incurred by Virginia Tech. (Provisions regarding unexpended funds).
- Facilities and Administrative Costs (F&A).

Note: Awards are made to the institution, with a Principal Investigator identified to conduct the project.

Why University Research...

The University's Perspective

- Create new knowledge.
- Provide students with research experience.
- Foster innovation, benefit the region, state, nation and world.
- Enable graduate education.
- Enhance undergraduate education.
- Improve programs and upgrade facilities.

The Sponsor's Perspective

- Support sponsor's mission.
- Expand fundamental knowledge base.
- Foster innovation, benefit the region, state, nation and world.
- Improve research infrastructure.
- Support national priority areas.
- Workforce development.
- Recruit future employees.

Our challenge ...



University
Researchers

Research
Sponsors

Finding the right match!

Proposal and Award Processes



Life Cycle of a Sponsored Project

Responsible Party

- Principal Investigator (PI)
- Co-PIs
- Business Manager
- Office of Sponsored Programs
- Limited Submission Coordinator (if applicable)



Responsible Party

- PI/Unit/Sponsor/Office of Sponsored Programs
- Virginia Tech Intellectual Properties, Inc.
- University Controller
- Purchasing
- Office of Research Compliance
 - Animal Subjects
 - Human Subjects
 - Export Controls
 - Biosafety (toxins, etc.)
 - Radiation Safety
 - Recombinant DNA

Responsible Party

- PI Team
- Dean/Department Head
- Office of Sponsored Programs
- Office of Research Compliance
- Office of Administrative Compliance (Conflict of Interest)
- Other offices as needed

Responsible Party

- PI/Sponsor/Office of Sponsored Programs
- University Legal Counsel
- Virginia Tech Intellectual Properties, Inc.

Phase I: Identify Funding and Develop Proposal

Find Funding

Online Databases

Weekly e-mail updates

Semi-monthly newsletter

Direct communication
from sponsors to Virginia
Tech

Direct communication
from sponsors to PI



Develop Concept

Review sponsor requirements

Assemble team with required
expertise

Evaluate infrastructure needs
for proposal development and
project performance

Secure institutional
commitments



Develop Proposal

Budget

Cost sharing

Letters of
Support

Biosketches

Coordinatio
n with
research
partners

Cost sharing

Data Managemen
t Plans


Postdoctoral
Mentoring
Plans

Regulatory
Compliance

Conflict of
Interest
Disclosures

Intellectual
Property

Phase II: Proposal Preparation, Routing Review and Submission

 **SPONSORED PROGRAMS APPROVAL FORM (SPAF)**
Invent the Future ☐ RESEARCH ☐ INSTRUCTION ☐ OUTREACH ☐ EXTENSION

PROPOSAL INFORMATION

Lead Investigator _____ Phone _____ Fax _____ E-mail Address _____
Address: Department / Center _____ Dept / Ctr Org _____
Sponsor/Agency (NIH Proposals require submission of the [NIH Compliance Form](#)) _____ Due Date _____ Postmark _____
2 DAY ADVANCE RECEIPT BY OSP REQUIRED

Proposal Title _____
Type: ☐ New ☐ Pre-proposal ☐ Revision of ☐ Supplement to ☐ Continuation ☐ Select Type Below:
☐ Basic or ☐ Requested or ☐ Applied ☐ Unsolicited

Where will the work be performed? _____ Building where majority of work will be performed? _____ Project related to a VT initiative: _____

Budget	Begin	End	%	Subcontract(s) will be issued		
	Year One	Year Two	Year Three	Year Four	Year Five	Total
Direct						\$0.00
Indirect						\$0.00
Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Cost Share*						\$0.00

* If cost sharing is involved, **FORM A - COST SHARING REQUEST** <http://www.osp.vt.edu/forms/Form A/Form A - Cost Share.doc> must be completed and submitted with this form.

PERCENT CREDIT

Investigator(s)	Banner ID	Department / Center	Dept Code	Credit %
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Summation of all credit should equal 100%				0%

SPONSOR / AGENCY

Contact _____ Phone _____ Address _____
Email Address _____ Fax _____
Overnight Address (street name) _____ City _____ State _____ Zip Code _____

SUBMISSION INSTRUCTIONS
(2 DAY ADVANCE RECEIPT BY OSP REQUIRED)

☐ OSP sends Hard Copy by Express Mail Original + _____ copies ☐ OSP Electronic Submission by Sponsor System (i.e. Fastlane, Grants.gov, etc) ☐ PI/Dept will submit Submission by Email ☐ OSP should notify when approved (put PI/Dept contact info in blank).

RESEARCH THEME AREA

Research Theme Area Proposal Relates To:
(Please mark only one category that best shows the predominance of your work.)

☐ Security ☐ Resilience ☐ Health ☐ Sustainability ☐ None of the Above

The Research Theme Areas are explained within the [Proposal Approval Instructions](#).

COMPLIANCE DATA

Yes No
☐ ☐ 1. Does this project involve the use of **Human Subjects**? Provide the IRB # if available. * IRB # _____
☐ ☐ 2. Does this project involve the use of Vertebrate **Animals**? Provide the IACUC # if available. * IACUC# _____
☐ ☐ 3. Does this project involve the use of synthetic biology, rDNA/rRNA, transgenic animals or plants; bio-hazardous materials (toxins, prions, bacterial, viral, fungal or parasitic agents that are infectious to humans, animals or plants or in which there is a deliberate transfer of a drug resistant trait), human or nonhuman primate blood, body fluids, cells or tissue culture; Select Agents; Dual Use Technologies which could threaten national security or be used for bioterrorism? IBC# _____
☐ ☐ 4. Is this project subject to **Export Control (ITAR / EAR)**?
* Compliance committee approval numbers are not required at time of submission but must be provided to OSP prior to award.

If any of the following categories are checked, additional clearances or approvals may be required prior to project initiation.

☐ Radioisotopes or X-Ray Devices ☐ Laser/Non Ionizing Radiation ☐ Nanotechnology
☐ Chemicals ☐ Good Lab Practices ☐ International

ADDITIONAL COORDINATION

Yes No
☐ ☐ 1. Will administrative expenses or supplies be charged to a federal project?
(If yes, submit OSP [http://www.osp.vt.edu/forms/Form B/Form B - COST ACCT EXCEPTION \(3-31-05\).DOC](http://www.osp.vt.edu/forms/Form B/Form B - COST ACCT EXCEPTION (3-31-05).DOC)).
☐ ☐ 2. Will this project require a special agreement regarding the distribution of overhead?
(If yes, submit OSP <http://www.osp.vt.edu/forms/Form C/FormCREVISED.PDF>).
☐ ☐ 3. Is this proposal subject to a limited submission? (If yes, coordinate with V.P. for Research prior to submission to OSP).
☐ ☐ 4. Is this work to perform testing services? (If yes, the Academic Research Services Agreement may be appropriate).
☐ ☐ 5. Does the project involve classified documents and/or industrial security clearance?
☐ ☐ 6. Is a special statement required in the transmittal letter? (If yes, attach statement).
☐ ☐ 7. Does the proposal involve creating a graduate course? (Please coordinate with the Graduate School).
☐ ☐ 8. Does the proposal involve either a non-credit course or conference? (Please coordinate with Continuing Ed).
☐ ☐ 9. Is University or Continuing Education housing or food services involved? (Please coordinate with Continuing Ed).

CONFLICT OF INTEREST CERTIFICATION

☐ Yes ☐ No Does any participating faculty or staff member or student (or their spouse or dependent children) have a significant financial interest (e.g. equity, ownership, consulting income or other payments) related to the research sponsor or named subcontractor? If yes, please explain below and submit disclosure form 13010 to reviewing officials.

<input type="checkbox"/> Yes	<input type="checkbox"/> No	Is the sponsor a Virginia Tech employee-owned business? (If yes, please identify employee-owner(s) even if the owner is not directly involved in the project.)
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Have you or anyone identified on this project been a consultant for this sponsor? If yes, please explain.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Do you or anyone identified on this project expect to consult for this sponsor during the life of the project?
See VT Policy 13010 for important definitions and policy information on conflict of interest.		
INTELLECTUAL PROPERTY		
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Will the proposed work use software or an invention belonging to VirginiaTech?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Will the proposed work generate new ideas or processes that could be commercialized?
REQUIRED SIGNATURES		
By signing, the Dean / Director or Designee confirm that adequate space, faculty time, and equipment are available and that any cost sharing obligations have been approved by the appropriate individuals.		
Lead Investigator	Date	Director / Dean or Designee
		Date
NOTES		

OSP USE ONLY	Revised 6-28-13
Date and Time Final Application Received (including SPAF): _____	
Date and Time Final Application Sent To Sponsor: _____	
Who sent Final Application To Sponsor? _____	
Cover letter required ____ Yes ____ No	
FCOI PHS ____ COI OTH ____	
Location of Final Proposal: _____	

Reviewed / Date	Entered / Date	Proposal No.
-----------------	----------------	--------------

Phase III: Final Negotiation, Award Acceptance

Award Receipt

Award Agreement
Negotiated and Signed

Project Authorization
Notice to PI

Work Begins

Phase IV: Project Performance, Reporting and Closeout

Project Progress

- Research and project management
- Milestones
- Annual Progress Reports
- Final Report
- Deliverables (data, events, hardware, testbeds etc.)
- Sponsor Site Visits (if applicable)
- Sponsor-required meetings (if applicable)
- Supplements (if applicable)

Financial and Administrative Compliance

- Funds Management and Financial Reporting
- Effort Reporting
- Subaward Management
- Amendments, supplements, or modifications to award (rebudgeting, no cost time extension requests, carry forward requests, etc.)
- Consulting agreements
- Cost sharing
- Commitments
- Closeout
- Internal Controls
- Sponsor Audits
- Training Requirements
- Financial Conflict of Interest Reporting

Regulatory Compliance

- Animal Care and Use
- Human Subjects
- Biosafety
- Radiation Safety
- Export Controls
- Internal Controls
- Training Requirements
- Subaward Management
- Sponsor Site Visits

Award Closeout



Final Technical Report

- PI is responsible for final technical report.
- Non-compliance can halt future funding from the sponsor.



Final Fiscal Report

- Generally due within 60-90 days of project completion.
- PI ensures that all costs have been reported and posted.
- Postaward administrator completes report.



Final Report of Inventions

- Required by many sponsors to ensure disclosure of inventions, when applicable.



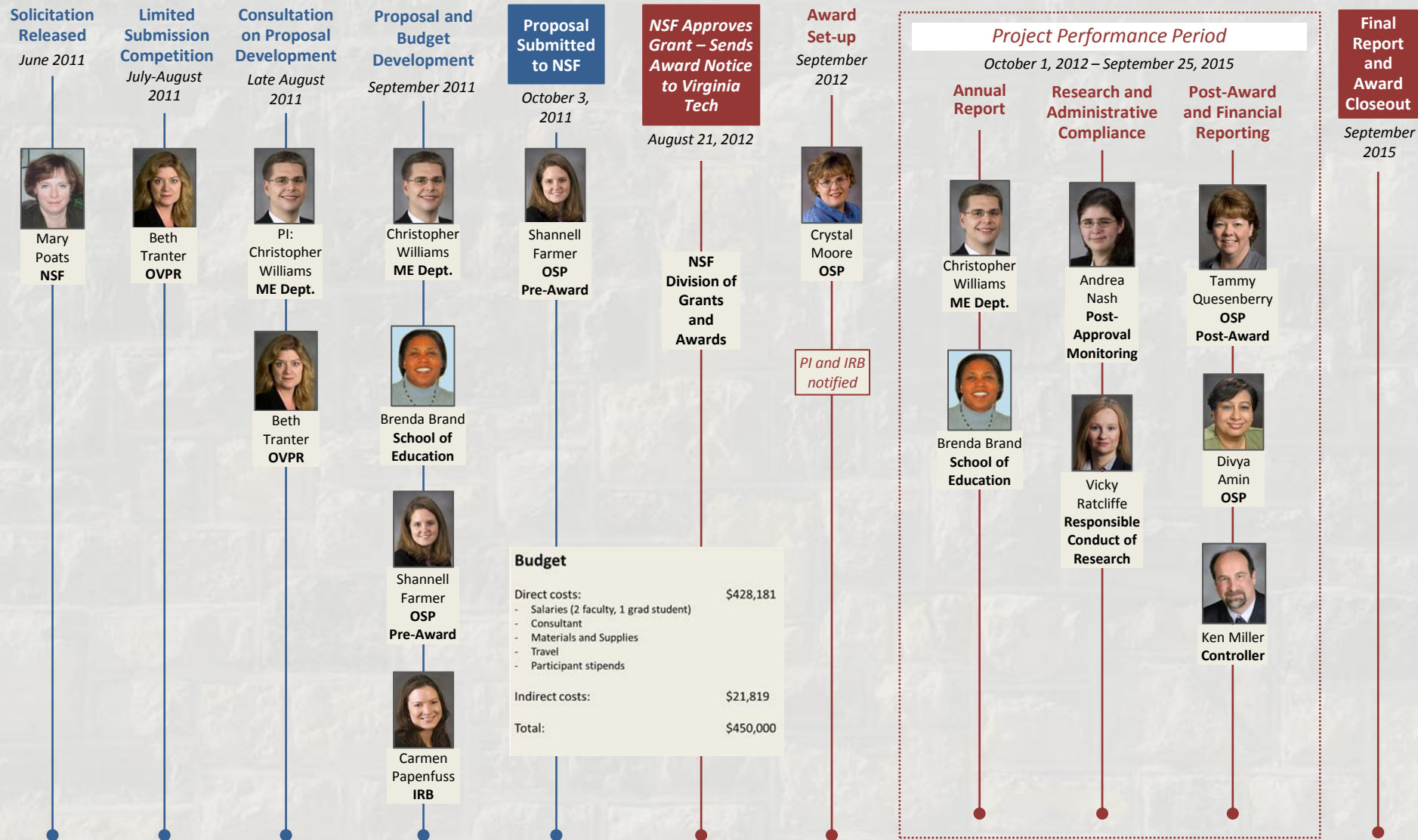
Final Property Report

- Some contracts require final property reports.
- Postaward administrators work with Fixed Assets to complete this report.

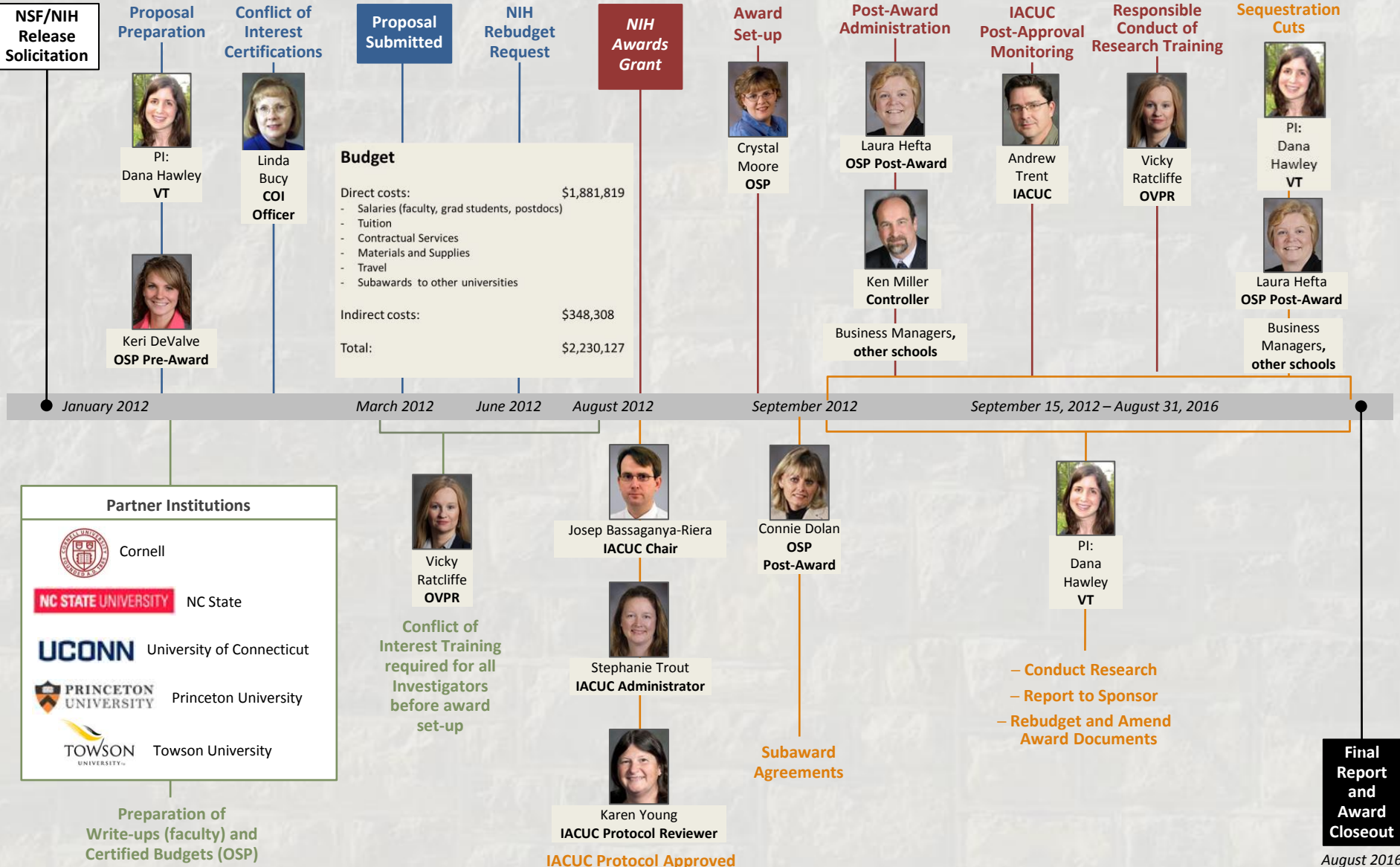
Life Cycles of Individual Projects



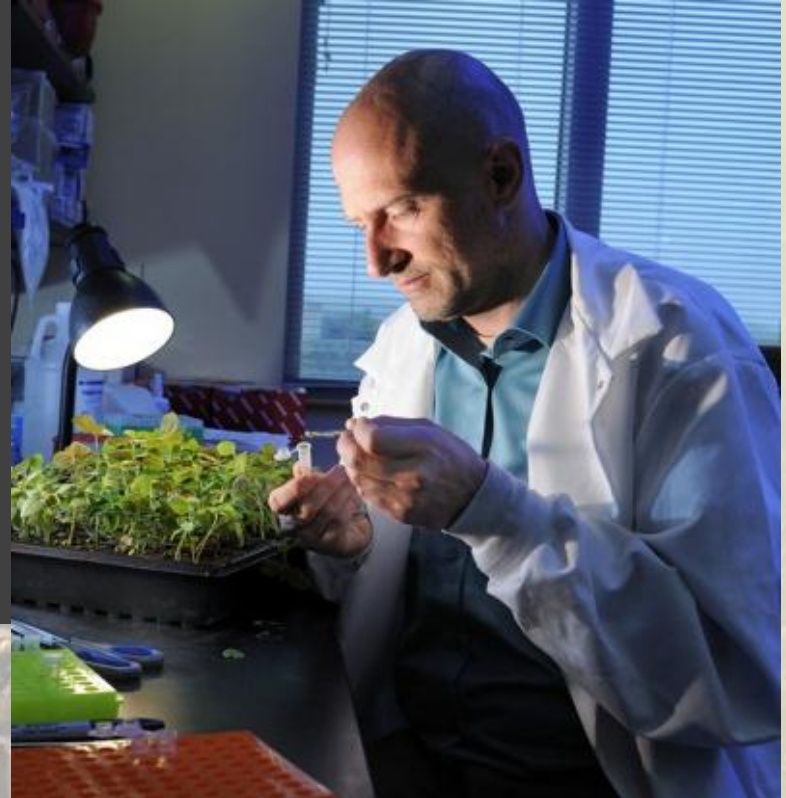
National Science Foundation Research Experiences for Teachers in Innovation-Based Manufacturing



NIH-NSF Ecology and Evolution of Infectious Disease



Sponsor Review Process and Oversight



The Peer Review Process

- Professional self-regulation/evaluation
- Service to the professional community

Benefits of faculty serving as reviewers:

- Gain first-hand knowledge of the process
- Learn about common problems with proposals
- Discover strategies to writing strong proposals
- Meet colleagues and NSF program officers managing programs relating to your interests

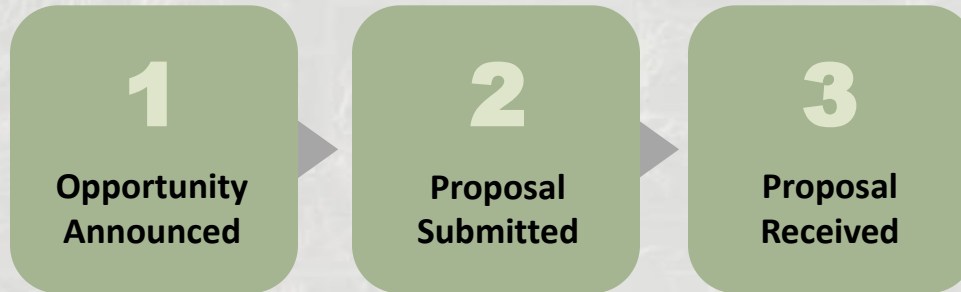
Sample review process: National Science Foundation

The NSF Merit Review Process

PHASE I

Proposal
Preparation and
Submission

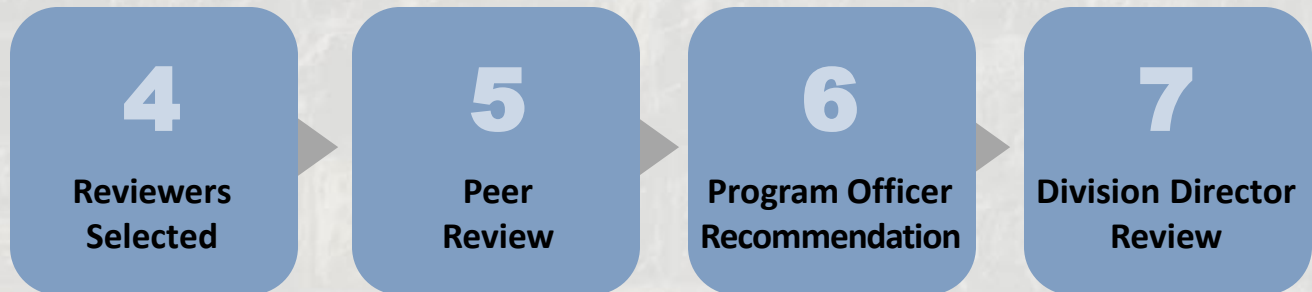
90 DAYS



PHASE II

Proposal Review
and Processing

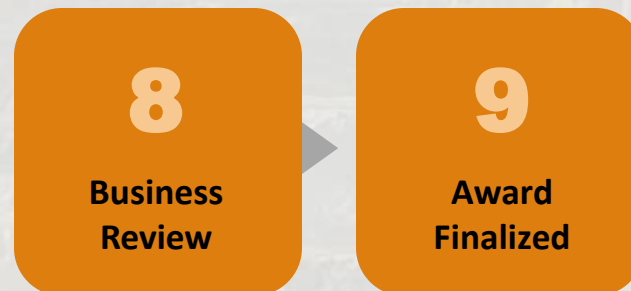
6 MONTHS



PHASE III

Award Processing

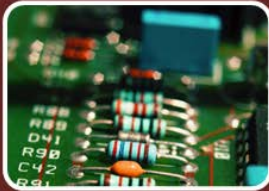
30 DAYS



Sponsor Oversight



Annual and Final Reporting



Other deliverables (workshops, testbeds, tools, data, etc.)



Audits



Site Reviews

Thank you

RESOLUTION FOR THE APPROVAL OF APPOINTMENTS TO THE VIRGINIA COAL AND ENERGY RESEARCH AND DEVELOPMENT ADVISORY BOARD

WHEREAS, The Virginia Coal and Energy Research and Development Advisory Board was established in 1977 by the enabling legislation for the Virginia Center for Coal and Energy Research and this legislation requires approval by the Board of Visitors for new appointments, reappointments and changes in the membership of the Advisory Board, the following new appointments are hereby presented to the Board of Visitors: Peter C. Diakun, J. Mark Estep, Donna Price Henry, C. David Hudgins, David T. Lawson, and William Murray.

WHEREAS, Peter C. Diakun is Vice President of Energy Programs at Newport News Shipbuilding, with responsibility for Department of Energy programs, commercial nuclear and industrial products businesses, and new energy and inorganic growth markets. He has received a B.S. in electrical engineering from Virginia Polytechnic Institute, and an M.S. in management from Rensselaer Polytechnic Institute. He has more than 26 years of leadership and project oversight experience in technological development, research development, and integrated power systems. He is particularly qualified to represent Virginia's industrial consumer sector on the Development Advisory Board of the Virginia Center for Coal and Energy Research.

WHEREAS, Dr. J. Mark Estep is the President of Southwest Virginia Community College in Richlands, Virginia. He earned a bachelor's degree from Berea College, a masters in industrial arts education from Murray State University, and a Ph.D. in practical arts and vocational Technical education from the University of Missouri, Columbia. He has worked in the coal mines of Appalachia, has experience teaching in the public school systems of Missouri and Kentucky, experience teaching and as an administrator at the college level at Appalachian State University in North Carolina and at Livingston University in Alabama. In addition, he served as Dean of Fine and Applied Arts at Appalachian State University. He is fully qualified to serve on the Development Advisory Board of the Virginia Center for Coal and Energy Research representing the higher education interests of southwest Virginia.

WHEREAS, Donna Price Henry is the Chancellor of The University of Virginia's College at Wise. She earned a B.A. in biological basis of behavior from The University of Pennsylvania, and a PH.D. in physiology from Thomas Jefferson University in Philadelphia. She's an experienced biologist who held a variety of faculty positions at Florida Gulf Coast University, including Dean of the College of Arts and Sciences. She served on the Board of Directors for Florida Foundation for Future Scientists. With significant experience in curricular development and STEM-H programming, she is fully qualified to serve on the Development Advisory Board of the Virginia Center for Coal and Energy Research representing the higher education sector of Virginia.

WHEREAS, C. David Hudgins is Director of Member and External Relations for Old Dominion Electric Cooperative (ODEC), Glen Allen, Virginia. Prior to joining ODEC, Mr. Hudgins served as Director of Economic Development for

Spotsylvania County, Virginia. He holds a B.S. in business administration and management from Virginia Commonwealth University. In this position, Mr. Hudgins works with member cooperatives, the public, and the government on policy and regulatory issues and also works to promote economic development opportunities by attracting businesses to the predominantly rural areas served by these cooperatives. Most recently, Mr. Hudgins was instrumental in the conception and establishment of the Mid-Atlantic Broadband Cooperative and has served as chairman and vice-chairman of the cooperative's board of directors. He is currently chairman of the Virginia Economic Development Partnership Board. He is fully qualified to serve in on the Development Advisory Board of the Virginia Center for Coal and Energy Research representing the electricity generation industry of Virginia and to advise on rural development issues.

WHEREAS, David T. Lawson is Vice President of Coal Marketing at Norfolk Southern Corporation and had more than 25 years of experience in transportation and logistics industries. He attended Louisiana State University, holds an MBA from Wayne State University, and completed the Harvard School of Business Advanced Management Program. He is fully qualified to serve on the Development Advisory Board of the Virginia Center for Coal and Energy Research representing the transportation.

WHEREAS, William Murray is the Managing Director of Public Policy for Dominion, an energy company based out of Richmond, Virginia. He holds a B.A. from the University of Virginia and a Ph.D. in public administration and policy from Virginia Tech. He previously worked as legislative director for Governors Mark Warner and Tim Kaine in Virginia, as the leader of Governor Terry McAuliffe's transition team, and as a senior legislative analyst with the Virginia General Assembly. He teaches public policy at the Virginia Commonwealth University School of Medicine and is on the board of the Virginia Chamber of Commerce and Bon Secours Health Source. He is fully qualified to serve in on the Development Advisory Board of the Virginia Center for Coal and Energy Research representing the electricity generation industry of Virginia and advising on public policy.

NOW, THEREFORE, BE IT RESOLVED that Peter C. Diakun, J. Mark Estepp, Donna Price Henry, C. David Hudgins, David T. Lawson, and William Murray be appointed as members of the Virginia Center for Coal and Energy Research and Development Advisory Board for 2014-2018.

RECOMMENDATION:

That Peter C. Diakun, J. Mark Estepp, Donna Price Henry, C. David Hudgins, David T. Lawson, and William Murray be appointed as members of the Virginia Center for Coal and Energy Research and Development Advisory Board for 2014-2018.

March 24, 2014

Committee Minutes

STUDENT AFFAIRS AND ATHLETICS COMMITTEE OF THE BOARD OF VISITORS

**Smithfield Room, The Inn at Virginia Tech and Skelton Conference Center
9:00 a.m.**

March 24, 2014

Board Members Present:

Cordel Faulk (Chair), John Lee, Steve Sturgis, Erica Wood (undergraduate student representative). Also in attendance was Mike Quillen (Rector).

Guests:

Whit Babcock, Brian Bolton, Cynthia Bonner, Tom Brown, Kanitta Charoensiri, Heather Evans, Ted Faulkner, Rick Ferraro, Bill Foy, Randy Fullhart, Martha Glass, Hunter Gresham, Hikmet Gursoy, Natalie Hart, Rachel Holloway, Elizabeth House, Byron Hughes, Kathy Kaplan, Laura Neff-Henderson, Susan Pedigo, Patty Perillo, Melissa Richards, Tim Sands, Frank Shushok, Kate Smucker, Ellie Sturgis, Nick Warrington, and Penny White.

Call to Order.

The meeting was called to order at 9:03 a.m.

Open Session

- 1. Opening Remarks and Approval of November 18, 2013 Minutes.** Mr. Cordel Faulk, Committee Chair, provided opening remarks and submitted the minutes of the November 18, 2013, Student Affairs and Athletics Committee meeting to the committee for review and acceptance. A motion was made and passed unanimously to approve the minutes as written.
- 2. Virginia Tech Student Experience Task Force:** Dr. Frank Shushok, Senior Associate Vice President for Student Affairs, introduced a task force convened by Provost Mark McNamee in partnership with Dr. Patricia Perillo to study the Virginia Tech residential campus experience and make recommendations about the trajectory of residence halls, student centers, dining, and other residential experiences. Dr. Shushok noted residential challenges at Kentucky where they have now outsourced their residential facilities. In addition, Ohio State has made a commitment to house not only all freshmen, but all sophomores as well. Dr. Rachel Holloway, vice provost for undergraduate academic affairs, joins Dr. Shushok as co-chair of the task force. The co-chair structure reflects the

integrated nature of living and learning at Virginia Tech. Dr. Holloway further reiterated the desire to create spaces where learning can happen everywhere, not just in the classroom. As examples, she referenced recent aesthetic and furniture changes in the Pamplin College of Business and the second floor of the Newman Library, noting how those spaces are now used and occupied frequently by students. The need for wireless throughout residence halls and high-traffic student areas is also a necessity and will be reviewed with other infrastructure-based concerns. The task force is expected to be operational for the 2014 calendar year.

3. **Task Force for a Healthier Virginia Tech Community:** Dr. Rick Ferraro, Assistant Vice President for Student Affairs, presented another task force, which he co-chairs alongside Cathy Kropff, Assistant Director for Hokie Wellness. This task force was initiated to promote health and wellness among our student population, as well as throughout all sectors of the university community, and to allow for services that are caring, cost-effective, and eminently deliverable. This task force was co-convened by Dr. Patricia Perillo, Vice President for Student Affairs, and Dr. Sherwood Wilson, Vice President for Administration. The work of the task force will be centered on the considerations of benevolence, safety and security, economic productivity, and a quest for balance. Dr. Ferraro noted a handout he provided in which eight dimensions for health and wellness have been defined. These dimensions include intellectual, occupational, physical, emotional, cultural, environmental, social, and spiritual. Bystander education will also be a focus. In addition to the principal working group, an advisory group has also been created to strengthen the task force's work.

4. **Athletic Department Report:** Attending his first board meeting and providing an inaugural report on, and strategic outlook for, intercollegiate athletics, the Student Affairs and Athletics Committee warmly welcomed new Director of Athletics, Mr. Whit Babcock. Mr. Babcock indicated his plan to evaluate and conduct a comprehensive assessment of the entire athletic enterprise. Mr. Babcock discussed an acronym of "C.A.P.S." which he translates as compliance, academics, performance, and support. Achieving "C.A.P.S." will help Virginia Tech become the preeminent athletic department in the ACC. He continued by discussing points of pride. Virginia Tech's NCAA Graduate Success Rate is 90% with 48% of student-athletes maintaining a cumulative GPA above 3.0. More academic all-americans were produced in Virginia Tech's first 10 years in the ACC than our previous 40 years of recognition. Mr. Babcock specifically offered congratulations to both the men's wrestling and men's swimming and diving teams on their recent ACC Championship titles. He further noted that wrestling has finished in the top ten in the country for the past two years. Future football schedules through 2025 and renderings of the Indoor Practice Facility were also shared with the committee.

5. **Fostering Globalization at Virginia Tech:** Dr. Patricia Perillo, Vice President for Student Affairs, and Mr. Brian Bolton, Director of the Cranwell International Center, discussed the Division of Student Affairs' strategic priority of fostering globalization and inclusive excellence. The division seeks to prepare all members of our community to effectively respond to opportunities presented in dynamic and diverse, domestic and global environments. Nurturing a diverse and inclusive community that supports mutual respect and builds intercultural competencies not only corresponds with the Division of Student Affairs' *Aspirations for Student Learning*, but also with the university's strategic plan, *A Plan for a New Horizon: Envisioning Virginia Tech 2012-2018*, and Principles of Community. Mr. Bolton reviewed current programs, services, and resources for international students including pre-departure communication offered online to assist with the transition, an on-campus international orientation, and meaningful interaction with global ambassadors. In addition, social functions and English conversation groups help welcome and integrate international students in the greater campus community. Dr. Perillo also shared the student affairs vision for a future Global Village. The initial steps of creating a Global Village will begin this summer with the move of Cranwell International Center staff to move into Harper Hall, a centralized on-campus residence hall, along with the Study Abroad Office from Outreach and International Affairs. Long term the hope is to create a living-learning community, a residential college, in which domestic and international students live together, and ultimately, to create community spaces and places for organic interaction.

Adjournment.

There being no further business, the meeting was adjourned at 11:21 a.m.

February 1, 2014

[Recipient list – page 3]

Dear [Recipient]:

The community of students, faculty, and staff who gather on campus each year to study, live, and work are central to the Virginia Tech experience. This community occurs in residence halls, classrooms, laboratories, dining halls, student centers, libraries, and outdoor spaces. It is in these physical places that relationships flourish, ideas are forged and challenged, and lives are changed. It is for this reason that the notion of “sense of place” is important for all those who call Virginia Tech their university home.

The university strategic plan, *A Plan for a New Horizon*, speaks directly to enhancing the student experience. The *Academic Implementation Strategy* also articulates this goal in more detail, listing a range of specific experiences that we seek to provide individuals during their time as a student. In order to accomplish the student experience goals outlined in our strategic plan, it is clear that we need to understand how best to enhance student experiences via our physical spaces and we need to envision and plan for future opportunities to develop and improve these spaces.

For this reason, I am commissioning a year-long task force to study the Virginia Tech residential campus experience and to make recommendations about the trajectory residential life, student centers, and dining will take in the decades ahead. The “Virginia Tech Student Experience Task Force” will pursue a number of important questions including:

1. Why is the residential nature of Virginia Tech important to our future competitive and educational advantage?
2. How can current research on best practices for living and learning inform our development of the Virginia Tech experience?
3. As we consider a new student center, what are the programmatic needs that must be housed within and where should it be located?
4. How should residential living at Virginia Tech look in 20 years?
5. How should Virginia Tech address its aging inventory of residential and learning facilities in order to reach programmatic goals?

Invent the Future

Virginia Tech Student Experience Task Force
February 1, 2014

6. What should the relationship between the residence halls, dining halls, student centers, and the libraries be in order to strengthen our residential campus?
7. How can we plan financially to achieve a bold vision for the facilities that support the Virginia Tech living and learning experience?
8. What are the short-, intermediate-, and long-term strategies the senior leadership of Virginia Tech should pursue in regards to improving our campus experience?
9. How can these strategies be supported and incorporated into future updates to our campus master plan?

Given your expertise, commitment to campus life, and your interest in strengthening Virginia Tech, I am asking you to serve as a member of this task force. The task force will be co-chaired by Frank Shushok, Associate Vice President for Student Affairs, and Rachel Holloway, Vice Provost for Undergraduate Academic Affairs. This co-chair structure reflects the integrated nature of living and learning at Virginia Tech. I anticipate that the first meeting will take place in February and the work of the task force will conclude with a comprehensive report and town hall gathering this coming December.

Please indicate your willingness to serve on this task force by emailing Shannon Stump at sstump@vt.edu no later than February 11th. Thank you for your consideration.

Sincerely,



Mark G. McNamee
Senior Vice President and Provost

cc: Charles Steger, President
Rachel Holloway, Vice Provost for Undergraduate Academic Affairs
Patty Perillo, Vice President for Student Affairs
Dwight Shelton, Vice President for Finance and Chief Financial Officer
Frank Shushok, Associate Vice President for Student Affairs
Sherwood Wilson, Vice President for Administration

Virginia Tech Student Experience Task Force
February 1, 2014

Frank Shushok – Co-chair
Associate Vice President for Student Affairs
fshushok@vt.edu

Rachel Holloway – Co-chair
Vice Provost for Undergraduate Academic
Affairs, Office of the Senior Vice President
and Provost
rhollowa@vt.edu

Kathryn Albright
Associate Professor, School of Architecture
and Design
kclarke@vt.edu

Bob Broyden
Assistant Vice President for Capital Assets
and Financial Management
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Karen DePauw
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Heather Evans
Director of the Virginia Tech Leadership
Education Collaborative
Hevans3@vt.edu

Tim Hodge
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Denise Simmons
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Ken Smith
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and Institutional Effectiveness, Office of the
Senior Vice President and Provost
kensmith@vt.edu

Tricia Smith
Associate Director of Housing and
Residence Life, Student Affairs
Pssmith@vt.edu

Jason Soileau
Assistant Vice President, Office of
University Planning
jsoileau@vt.edu

*Students – Up to 3 to be identified by Frank
Shushok and Rachel Holloway*



RE: Task Force for a Healthier Virginia Tech Community

January 22, 2014

Dear [Name],

Greetings! It is with excitement that we announce the establishment of a joint task force between student affairs and human resources focused on health and wellness, entitled the **Task Force for a Healthier Virginia Tech Community**. The purposes of this Task Force, which will commence its work in the spring of 2014, and which will likely meet once or twice a month, will include the following:

- 1) To help implement the University and divisional strategic plans that relate to health and wellness.
- 2) To promote health and wellness among all sectors in the University Community. Students are a natural and primary constituency for student affairs, but because health and wellness concerns are interconnected in a close knit, residential academic community, the Task Force should look for means to collaborate on health and wellness matters that also touch faculty and staff.
- 3) To continue to integrate the health and wellness services of diverse offices and departments, both within and outside of student affairs, in part to enhance capacity and expertise, but also to allow for services that are caring, cost-effective, and eminently deliverable.

The Task Force, to fulfill those purposes, will do the following:

- 1) Define key relevant terms, including most notably what is meant by "health and wellness" at Virginia Tech.
- 2) Advocate for best practices, based both on an understanding of local/regional needs and peer school and national perspectives.
- 3) Seek solutions that combine idealism with pragmatism, and that are calculated to produce significant, helping outcomes.

~continued~

The work of the Task Force is rooted in a number of considerations:

- 1) Benevolence: How do we care better for the health and wellness of our students, faculty, and staff, so that, in combination with their own good efforts, they can lead more productive and happier lives?
- 2) Safety and Security: How can improved health and wellness lead to a safer and more secure academic community?
- 3) Economic Productivity: How can improved health and wellness stabilize health costs and increase productivity, in a period rife with financial challenges, especially in this area?

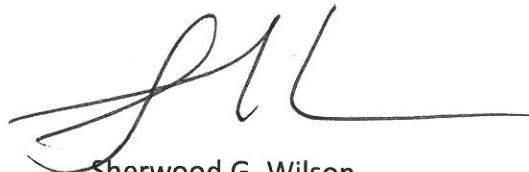
The Task Force will be co-convened by Dr. Rick Ferraro, Assistant Vice President for Student Affairs, and Ms. Cathy Kropff, Assistant Director for Hokie Wellness. We want to invite you to serve on the principal working group and we hope you will accept this invitation. Please email Hunter Gresham (hgresham@vt.edu) at your earliest convenience, but no later than Monday, January 27, regarding your willingness to serve on this very important task force. We look forward to learning about your discoveries and ideas as you engage this work with other campus colleagues.

Thanks for your willingness to consider such an important role that will serve our campus community in important ways.

Sincerely,



Patricia A. Perillo
Vice President for Student Affairs



Sherwood G. Wilson
Vice President for Administration



RE: Advisory Group to the Task Force for a Healthier Virginia Tech Community

January 22, 2014

Dear [Name],

Greetings! It is with excitement that we announce the establishment of a joint task force between student affairs and human resources focused on health and wellness, entitled the **Task Force for a Healthier Virginia Tech Community**. The working group will be comprised of faculty, staff and students across the university; invitations to serve on the principal working group have already been sent and the group will commence its work in February, 2014.

The purposes of this Task Force, which will likely meet once or twice a month, will include the following:

- 1) To help implement the University and divisional strategic plans that relate to health and wellness.
- 2) To promote health and wellness among all sectors in the University Community. Students are a natural and primary constituency for student affairs, but because health and wellness concerns are interconnected in a close knit, residential academic community, the Task Force should look for means to collaborate on health and wellness matters that also touch faculty and staff.
- 3) To continue to integrate the health and wellness services of diverse offices and departments, both within and outside of student affairs, in part to enhance capacity and expertise, but also to allow for services that are caring, cost-effective, and eminently deliverable.

The Task Force, to fulfill those purposes, will do the following:

- 1) Define key relevant terms, including most notably what is meant by "health and wellness" at Virginia Tech.
- 2) Advocate for best practices, based both on an understanding of local/regional needs and peer school and national perspectives.
- 3) Seek solutions that combine idealism with pragmatism, and that are calculated to produce significant, helping outcomes.

Invent the Future

The work of the Task Force is rooted in a number of considerations:

- 1) **Benevolence:** How do we care better for the health and wellness of our students, faculty, and staff, so that, in combination with their own good efforts, they can lead more productive and happier lives?
- 2) **Safety and Security:** How can improved health and wellness lead to a safer and more secure academic community?
- 3) **Economic Productivity:** How can improved health and wellness stabilize health costs and increase productivity, in a period rife with financial challenges, especially in this area?

The Task Force will be co-convened by Dr. Rick Ferraro, Assistant Vice President for Student Affairs, and Ms. Cathy Kropff, Assistant Director for Hokie Wellness.

In addition to having a Principal Working Group, we felt that the task force's work would be strengthened by an **Advisory Group**. And, this is the primary purpose of our note to you. We want to invite you to serve on the **Advisory Group**, which will meet about 2-3 times each semester. We hope you will accept this invitation.

Please email Hunter Gresham (hgresham@vt.edu) at your earliest convenience, but no later than Monday, January 27, regarding your willingness to serve on this very important **Advisory Group**. We look forward to learning about your discoveries and ideas as you advise with other campus colleagues.

Thanks for your willingness to consider such an important role that will serve our campus community in important ways.

Sincerely,



Patricia A. Perillo
Vice President for Student Affairs



Sherwood G. Wilson
Vice President for Administration

Persons to Serve on the Student Affairs Health and Wellness Task Force

Principal Working Group

- Jenny Wagstaff, Asst. Director, Campus Alcohol Abuse Prevention Center
- Jon Fritsch, Assistant Director for Health Education, Schiffert Health Center
- Chris Wise, Director, Recreational Sports
- Amanda Mellowspring, Nutritionist, Schiffert Health Center
- Mark Patishnock, Counselor, Cook Counseling Center
- Jessica Filip, Training Manager, Dining Services
- Amy McPherson, Career Services
- Eleanor Finger, Director, Housing and Residential Life (or Jamie Penven or Tricia Smith—awaiting recommendation from Eleanor)
- Brian Bolton, Director of Cranwell International Center
- Major Carrie Cox, Corps of Cadets
- Byron Hughes, Fraternity and Sorority Life

Advisory Group

- Kim Smith, Student Success Center
- Prof. Janet Rankin, HNFE (or Carol Papillon)
- Dr. Kathy Hosig, Masters in Public Health Program
- Christine Dennis Smith, Women's Center
- Reyna Gilbert-Lowry, Varsity Athletics (Danny White suggested Reyna, with whom I have worked.)
- Ennis McCrery, from the Graduate School

Undergraduate Students (Select 2 to 3 to put on principal working group)

- Amanda Krzepicki, junior in HNFE, (works for Health Promotion)
- Maya Gantt, junior in HNFE, (works for Health Promotion)
- Sara Spiers, student active in healthy minds
- Christine Lavin (Master's Student, works for Health Promotion)
- Alicia Azzi, (nominated by SGA)
- Courtney Scaggs (nominated by SGA)
- Have not been able to obtain a nomination from GSA.

**Intercollegiate Athletics report to the
Student Affairs & Athletic Committee of
the Board of Visitors**

March 24, 2014

Agenda

- About Me – I'm Honored to be a Hokie
- First Steps on the Job – 35 Days
- Leadership Philosophy
- Current Organizational Structure
- Challenges Ahead
- Opportunities
- Academic Success and Student-Athlete Life – Points of Pride
- ACC Champions – Men's Swimming & Diving
- Future Football Schedules
- Renderings – Indoor Practice Facility
- Questions, and Advice for Me?

About Me

I'm Honored to be a Hokie

First Steps on the Job 35 Days

- Evaluate the Entire Enterprise
- Comprehensive Assessment
- S.W.O.T Meetings



VIRGINIA TECH ATHLETICS

Staff Assignment and Data Sheet

Name

Unit

Years of Service at VT

(Please use the back side of this page if more room is needed)

Describe yourself (Your interests, hobbies, etc.)

strengths

weaknesses

Who are the people within the department that you go to when there are issues, problems, or important decisions to be made?

opportunities

threats

Who are the staff members within the department that you would describe as having "positive energy"?



VIRGINIA TECH ATHLETICS

Start/Continue/Stop Worksheet

START	List one or two things The Department of Athletics should START doing.
CONTINUE	List one or two things The Department of Athletics should CONTINUE doing.
STOP	List one or two things The Department of Athletics should STOP doing.

Leadership Philosophy

- Character and Competence
- Courage and Compassion

Good leadership involves responsibility to the welfare of the group, which means that some people will get angry at your decisions. It's inevitable, if you're honorable. Trying to get everyone to like you is a sign of mediocrity: you'll avoid the tough decisions, you'll avoid confronting the people who need to be confronted, and you'll avoid offering differential rewards based on differential performance because some people might get upset.

Ironically, by procrastinating on the difficult choices, by trying not to get anyone mad, and by treating everyone equally "nicely" regardless of their contributions, you'll simply ensure that the only people you'll wind up angering are the most creative and productive people in the organization.

The day soldiers stop bringing you their problems is the day you have stopped leading them. They have confidence that you can help them or concluded that you do not care. Either case is a failure of leadership. If this were a litmus test, the majority of CEOs would fail. One, they build so many barriers to upward communication that the very idea of someone lower in the hierarchy looking up to the leader for help is ludicrous. Two, the corporate culture they foster often defines asking for help as weakness or failure, so people cover up their gaps, and the organization suffers accordingly. Real leaders make themselves accessible and available. They show concern for the efforts and challenges faced by underlings, even as they demand high standards. Accordingly, they are more likely to create an environment where problem analysis replaces blame.

- Colin Powell

Look for intelligence and judgment, and most critically, a capacity to anticipate, to see around corners. Also look for loyalty, integrity, a high energy drive, a balanced ego, and the drive to get things done. How often do our recruitment and hiring processes tap into these attributes? More often than not, we ignore them in favor of length or resume, degrees and prior titles. A string of job descriptions a recruit held yesterday seem to be more important than who one is today, what they can contribute tomorrow, or how well their values mesh with those of the organization. You can train a bright, willing novice in the fundamentals of your business fairly readily, but it's a lot harder to train someone to have integrity, judgment, balance, and the drive to get things done.

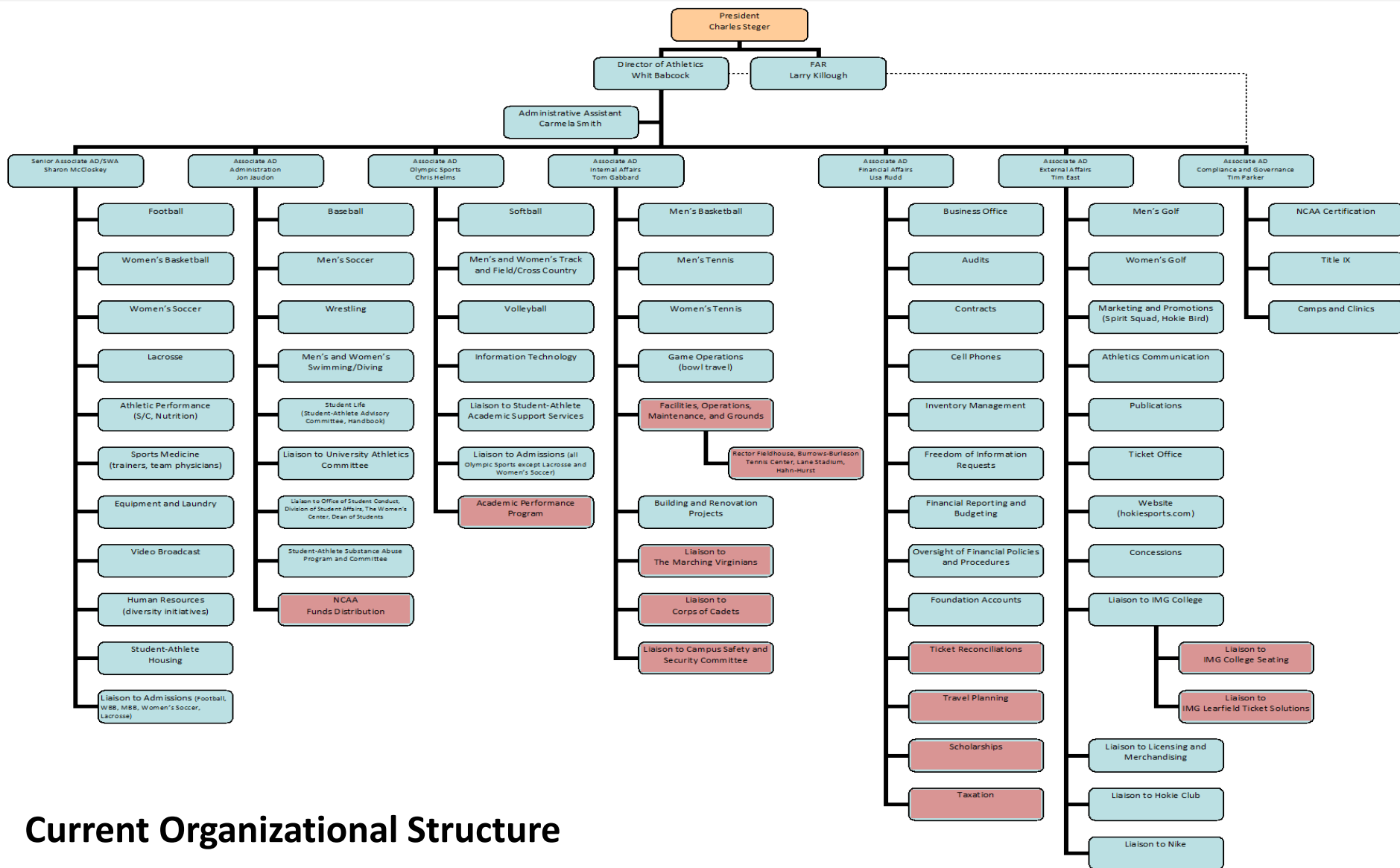
Use the formula P-40 to 70, in which P stands for the probability of the success and the numbers indicate the percentage of information acquired. Once the information is in the 40 to 70 range, go with your gut. Don't take action if you have only enough information to give you less than a 40 percent chance of being right, but don't wait until you have enough facts to be 100 percent sure, because by then it is almost always too late. Today, excessive delays in the name of information-gathering breeds analysis paralysis. Procrastination in the name of reducing risk actually increases risk.

Have fun in your command. Don't always run at a break neck pace. Take leave when you've earned it. Spend time with your families. Surround yourself with people who take their work seriously, but not themselves, those who work hard and play hard. Herb Kelleher of Southwest Air and Anita Roddick of The Body Shop would agree: seek people who have some balance in their lives, who are fun to hang out with, who like to laugh (at themselves, too) and who have some non-job priorities which they approach with the same passion that they do their work. Spare me the grim workaholic or the pompous pretentious professional: I'll help them find jobs with my competitor.

- Colin Powell



VIRGINIA TECH ATHLETICS



Current Organizational Structure

Challenges Ahead

- Comprehensive Assessment of All Operating Units
- Development and Refinement of Vision and Strategic Direction
- Major Coaching Changes
- Community Engagement – External Affairs
- Structure, Governance and Compliance of Division I Athletics and NCAA
- The Financial Equation

Opportunities

- Continue the Upward Trajectory, in Alignment with University's Mission and Core Values
- To become the Preeminent Athletic Department in the ACC
- C.A.P.S.
- Strong Together ... No One of Us is as Strong as All of Us

Academic Success and Student Athlete Life – Points of Pride

VT Athletics Department Academic Accomplishments

2013 Graduation Rates

- VT Student-Athletes Federal Graduation Rate – 73% (National Average – 65%)
 - ACC Comparison
 - 8th in the Conference
 - 3rd Best public institution, behind Virginia and Maryland
- VT NCAA Graduation Success Rate – 90%
 - ACC Comparison
 - 6th in the Conference: Notre Dame (99), Duke (98), BC (96), Wake (94) and Miami (92)
 - 1st public institution: Teams with 100% - Women's basketball, golf, lacrosse, softball, women's soccer, women's swimming & diving, and women's tennis.
 - MBB: GSR of 90%, 20 percentage points above the Division I average. Tied for second in the ACC with UNC and behind only Duke and Notre Dame, both of whom had 100.
 - Football: GSR of 78%, ranked 5th in ACC schools and eight percentage points above the national average of 70. Only BC (94), Duke (92), Miami (86) and Wake Forest (86) ranked higher in ACC.

Academic Success and Student Athlete Life – Points of Pride

VT Athletics Department Academic Accomplishments

At the Conclusion of the Fall 2013 Semester

- 48% of our student-athletes maintain a cumulative GPA above 3.0
- More than 25% of our student-athletes made the Dean's List (3.4 or better)
- The average team fall semester GPA – 3.02
- The average team cumulative GPA – 3.03

	Baseball	Men's Basketball	Men's Cross Country	Football	Golf	Men's Soccer	Men's Swimming	Men's Track	Men's Tennis	Wrestling
Semester	2.97	2.66	3.03	2.43	2.98	2.95	3.07	2.79	3.25	2.80
Cumulative	2.89	2.46	2.90	2.57	3.14	3.13	3.11	2.89	3.38	2.91

	Women's Basketball	Women's Cross Country	Lacrosse	Softball	Women's Soccer	Women's Swimming	Women's Track	Women's Tennis	Volleyball
Semester	2.82	3.22	3.18	3.08	3.52	3.19	3.15	3.12	3.13
Cumulative	2.72	3.26	3.07	3.06	3.43	3.12	3.22	3.21	3.20

Academic Success and Student Athlete Life – Points of Pride

VT Athletics Department Academic Accomplishments

Academic Honors and Awards

- Academic All-Americans: our first 10 years in the ACC produced more Academic All-Americans (25) than our previous 40 years of recognition (24)
- Five former Hokie student-athletes have received the NCAA Division I Degree Completion Award in the past four years. Through this award, student-athletes who could not complete their education during their five-year eligibility period were able to complete their undergraduate degree at Virginia Tech.

2008-09: Jeff Landing – Baseball

2009-10: Kaan Tayla – Men's Swimming

2010-11: Tere Williams – Women's Basketball

2012-13: Patrick Pinkman – Baseball

2012-13: Kevin Jones - Football

Academic Success and Student Athlete Life – Points of Pride

VT Athletics Department Academic Accomplishments

VT Athletics Office of Student Life Engagement

- **Career Development**
 - Internships: student-athletes have also taken advantage of opportunities to gain experience in sports-related industries through the highly-selective NIKE Ignite Sports Marketing Internship Program, ACC Futures Internship Program, NCAA Career in Sports Forum and NCAA Student-Athlete Leadership Forum.
 - Provides ongoing programming including an annual Etiquette Dinner, Senior Transition Seminar, Freshman Orientation, resume critique, mock-interview and career/graduate education guidance to over 500+ student-athletes.
- **Community Outreach**
 - During the 2012-13 academic year, VT student-athletes impacted approximately 2500 youth through community outreach initiatives in partnership with many local schools, programs and non-profits.

Academic Success and Student Athlete Life – Points of Pride VT Athletics Department Academic Accomplishments

VT Athletics Office of Student Life Engagement

- **Leadership Development**
 - LDRS 1016 – Global Citizen Leadership
 - Office of Student Life has developed a study abroad course in the Dominican Republic with an academic focus on leadership theory and service.
 - Developed in collaboration with the Department of Agriculture and Extension Education and VT's Leadership and Social Change minor.
 - While abroad, students partner with VT's Caribbean Center for Education and Research, local non-profits, NGO's and Peace Corp Volunteers in conducting a five-day HIV/AIDS education and sports clinic offered to over 60 youth from the Veron community.
 - Twenty student-athletes have enrolled in the course in the two years it has been offered and roughly 12 are slated to enroll in the third course offering this summer.

ACC Champions Men's Swimming & Diving



ACC Champions Wrestling



ACC Champions

Men's Swimming & Diving

Virginia Tech	1264.5
NC State	1226
North Carolina	995
Virginia	972
Florida State	957.5
Notre Dame	907.5
Georgia Tech	543
Duke	482
Pittsburgh	412.5
Boston College	205
Miami	156

Future Football Schedules

2014	
8/30	William & Mary
9/6	@ Ohio State
9/13	East Carolina
9/20	Georgia Tech
9/27	Western Michigan
10/4	@ North Carolina
10/16	@ Pittsburgh
10/23	Miami
11/1	Boston College
11/15	@ Duke
11/22	@ Wake Forest
11/28	Virginia

2015	
9/7	Ohio State
9/12	Furman
9/19	@ Purdue
9/26	@ East Carolina
	Duke
	North Carolina
	Pittsburgh
	NC State
	@ Miami
	@ Virginia
	@ Boston College
	@ Georgia Tech

2016	
9/3	Liberty
9/10	Tennessee @ Bristol
9/17	East Carolina
11/19	@ Notre Dame
	Georgia Tech
	Miami
	Virginia
	Boston College
	@ Duke
	@ North Carolina
	@ Pittsburgh
	@ Syracuse

Future Football Schedules

2017	
9/2	Delaware
9/9	Ninth ACC Game?
9/16	@ East Carolina
9/23	Old Dominion
	North Carolina
	Pittsburgh
	Clemson
	Duke
	@ Miami
	@ Virginia
	@ Boston College
	@ Georgia Tech

2018	
9/1	William & Mary
9/8	@ Old Dominion
9/15	East Carolina
9/22	Notre Dame (date not set)
	Georgia Tech
	Miami
	Virginia
	Boston College
	@ Duke
	@ North Carolina
	@ Pittsburgh
	@ Florida State

2019	
8/31	Furman
9/7	Old Dominion
9/14	@ Wisconsin
9/21	@ East Carolina
	Duke
	North Carolina
	Pittsburgh
	Wake Forest
	@ Georgia Tech
	@ Miami
	@ Virginia
	@ Boston College

Future Football Schedules

2020	
9/5	Liberty
9/12	Wisconsin
9/19	@ Michigan
9/26	East Carolina
	Georgia Tech
	Miami
	Virginia
	Boston College
	@ Duke
	@ North Carolina
	@ Pittsburgh
	@ Louisville

2021	
9/4	Richmond
9/11	Michigan
9/18	@ West Virginia
9/25	Notre Dame (date not set)
	Duke
	North Carolina
	Pittsburgh
	Syracuse
	@ Georgia Tech
	@ Miami
	@ Virginia
	@ Boston College

2022	
9/3	
9/10	@ Old Dominion
9/17	Penn State
9/24	West Virginia
	Georgia Tech
	Miami
	Virginia
	Boston College
	@ Duke
	@ North Carolina
	@ Pittsburgh
	@ NC State

Future Football Schedules

2023	
9/2	
9/9	Purdue
9/16	@ Penn State
9/23	Old Dominion
	Duke
	North Carolina
	Pittsburgh
	Florida State
	@ Georgia Tech
	@ Miami
	@ Virginia
	@ Boston College

2024	
9/7	
9/14	Rutgers
9/21	@ Old Dominion
9/28	@ Notre Dame (date not set)
	Georgia Tech
	Miami
	Virginia
	Boston College
	@ Duke
	@ North Carolina
	@ Pittsburgh
	@ Clemson

2025	
8/31	
9/6	@ Rutgers
9/13	Old Dominion
9/20	

Indoor Practice Facility



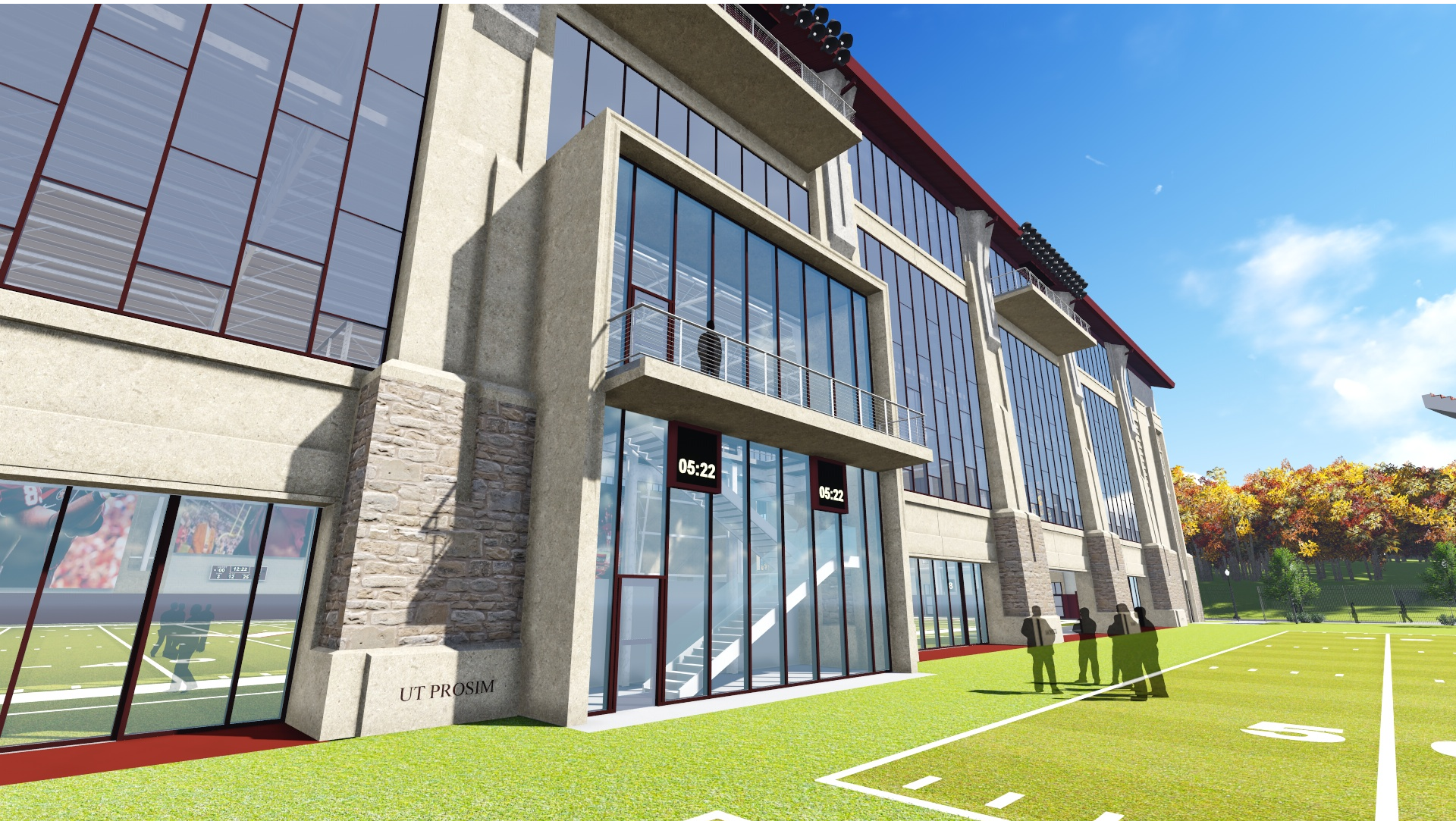
VIRGINIA TECH ATHLETICS



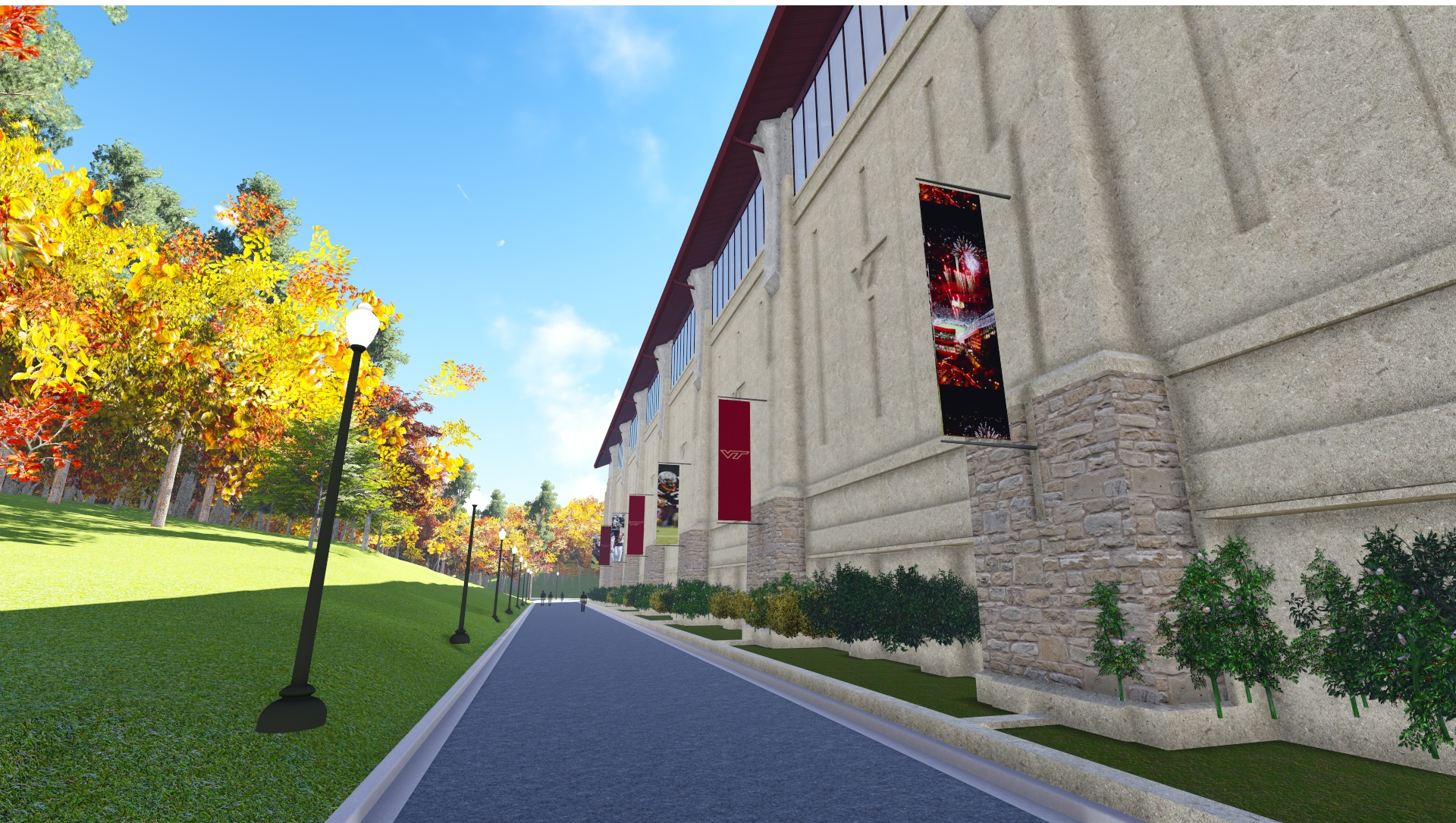
VIRGINIA TECH ATHLETICS



VIRGINIA TECH ATHLETICS



VIRGINIA TECH ATHLETICS



VIRGINIA TECH ATHLETICS



VIRGINIA TECH ATHLETICS



VIRGINIA TECH ATHLETICS



VIRGINIA TECH ATHLETICS



Questions?

- And, Any Advice for Me?

**Thank You
and Go Hokies!**

Fostering Globalization at Virginia Tech

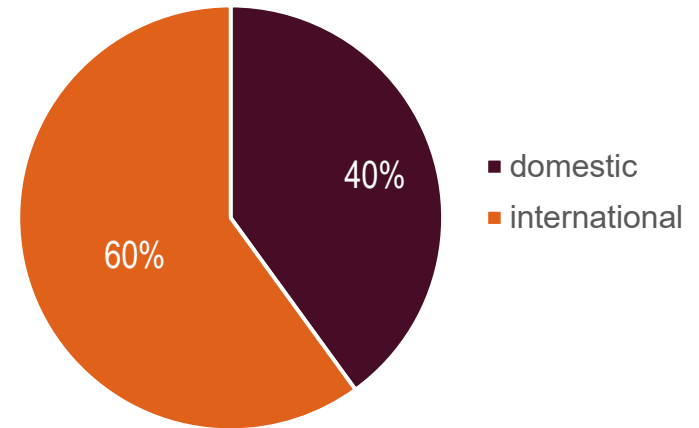


Graduate Enrollments

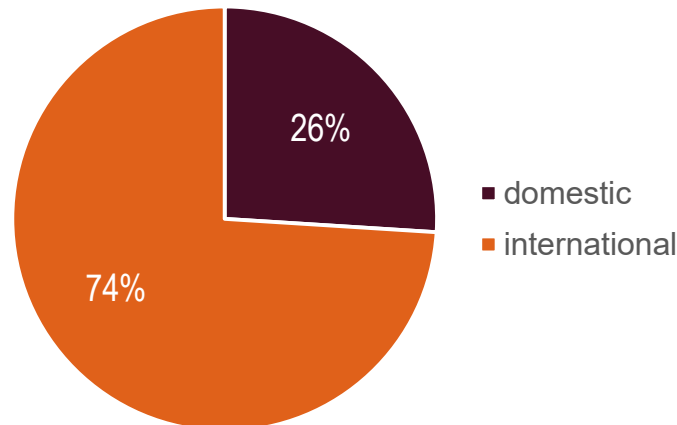
International students account for approximately 1/3 of the graduate population at Virginia Tech.

In some departments, they form the majority of the student body.

Electrical Engineering

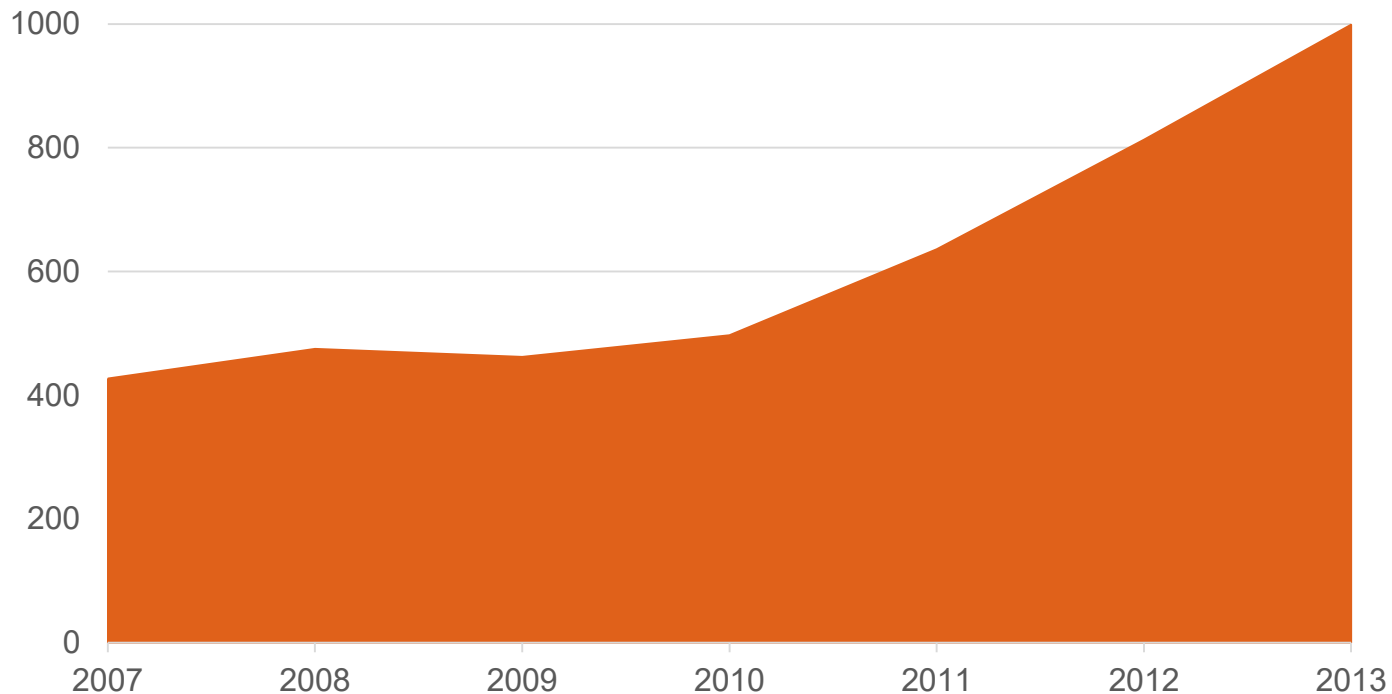


Computer Science



Undergraduate Enrollments

999 in 2013 - doubled in just 3 years



Value added by international students:

- Expose domestic students to new ideas, providing interactions that will shape and expand their view of the world
- Enliven campus and classrooms with new perspectives and knowhow
- Enhance Virginia Tech's ability to conduct research, recruit and retain instructional talent, and offer high-quality programs to U.S. students

Value added by international students:

- Positively impact the learning environment
- According to an estimate compiled by NAFSA: Association of International Educators, international students at Virginia Tech contribute more than **\$43 million** to the local economy (2011-2012 academic year)... making education one of the state's leading exports!



Our Call to Act...

THE MISSION OF GLOBALIZATION

Higher Education Call:

“Today, a high-quality education must prepare students to live and work in a world characterized by growing multiculturalism and diminishing borders.”

– American Council on Education

University Call: A Plan for a New Horizon

“**International engagement** is becoming an imperative for higher education, given the pace of globalization and the flow of people and ideas across geographical borders.”

“As citizens in a global community, our students can only benefit from access to and immersion in **rich cultural experiences**; therefore, we will seek to ensure that opportunities for **international engagement** ... are viable for as many students as possible. We will continue to pursue the local-global connections that join our resident international students with domestic students to create a **diverse intercultural campus environment**.”

Division of Student Affairs Call: Strategic Priorities

- “Students and division employees will expand their appreciation, understanding, and respect for **others who are different than themselves.**”
- “Develop strategies to promote **meaningful interaction** between our international and domestic students and find ways to engage international faculty and staff with domestic faculty and staff.”
- “Promote the value of engaging in **diverse intercultural courses, activities, and experiences** to prepare for employment and community-building in our diverse society.”
- The “residential learning experience ... exposes students to **new cultures**, social diversity, and **new ways to see the world** around them.”



Cranwell International Center

HOW WE STRIVE TO ANSWER THIS CALL NOW

Cranwell International Center Staff



Brian Bolton
Director



Suzie Baker
Assistant Director



Lyndsy Manz
Assistant Director



Belinda Pauley
SEVIS Compliance
Officer



Karen Wills
Immigration Advisor



Karen Howe
Community Liaison



Meredith Hampton
Admin. Assistant



Ayesha Yousafzai
Graduate Assistant

Services and Programs

- Pre-departure communication, including online course to prepare for transition
- Orientation
- Global Ambassadors



Services and Programs

- Social and acculturation activities
 - Wilderness Adventure Weekend
 - Pie Day
- English Conversation Groups
- Navigate & Facilitate Mandates
 - DMV, SSA, IRS
- International Street Fair





The Virginia Tech Global Village

OUR VISION FOR THE FUTURE

Global Village

- Provide opportunities to better centralize and simplify the complex range of services that support international student travel and study

Vision for Living and Learning

- All majors, with priority given to students enrolled in international studies, foreign languages, or with career aspirations abroad
- Open to first year through graduate school
- Emphasis on curricular and co-curricular opportunities to engage a robust experience that is distinctly global in orientation
- Assist students to more fully develop their international competency



RESEARCH AND DEVELOPMENT DISCLOSURE REPORT								
October 22, 2013 through February 28, 2014								
Reason for Conflict	External Entity	Owner	Principal Investigator	Co - P.I.'s	College/Dept.	Period of Performance	Award Amount	Project Description
Faculty Owned Business	NBE Technologies LLC	Guo-Quan Lu	Khai Ngo		Center for Power Electronics Systems (CPES)	TBD	\$40,000	Virginia Tech is a subcontractor on a proposed NSF SBIR Phase I project. VT's tasks would include performing tests and analyzing operations of PowERazor modules to evaluate temperature/power cycling.
Faculty Owned Business	Open Source Electronic Health Record Agent(OSEHRA)	Seong K. Mun	Seong K. Mun	(Mgmt Oversight- Dr. Tim Long)	Arlington Innovation Center	TBD	\$140,934	The US Department of Veterans Affairs (VA) is continuing to develop and promote open source electronic health records which can be shared across all VA facilities. These efforts are managed through OSEHRA under technical leadership of S.K.Mun. Dr. Tim Long in the College of Science provides independent oversight for the project.
Faculty Owned Business	AVEC, Inc.	Ricardo Burdisso	William Devenport		VT Wind Tunnel	TBD	\$140,000 approx. cost	Dr. Devenport, on behalf of the VT Wind Tunnel research group, has requested to make a sole source procurement from AVEC for the design and manufacture of a specialty piece of equipment. This was determined to fall under the R&D exemption and was approved for purchase through the VT Procurement Office.
Faculty Owned Business	Voltmed	Rafael Davalos Michael Sano	Rafael Davalos	(Mgmt Oversight - Dr. Stefan Duma & Dr. Jack Lesko)	SBES-Engineering	TBD	\$103, 484	VT will be a subcontractor under proposed NSF STTR Phase I. Dr. Davalos will be PI For VT. Mike Sano will be PI for start-up company. To mitigate risk, SBES Dept Head, Stefan Duma and Dr. Jack Lesko, Associate Dean in College of Engr will provide oversight. Work involves developing a platform for pancreatic cancer treatment using endoscopic-based technology.
Faculty Owned Business	BioTherapeutics, Inc.	Josep Bassaganya-Riera Raquel Hontecillas	Marion Ehrich		Virginia-Maryland Regional College of Veterinary Medicine	TBD	\$56,303	Dr. Ehrich has received an award from BioTherapeutics. Neither Bassaganya-Riera nor Hontecillas, owners of the company, are involved in the VT award. The work is for initial animal studies to determine dosing paradigms for future in depth studies. Agent proposed for treatment of diabetes.

**RESOLUTION ON NAMING THE THIRD FLOOR CONFERENCE ROOM IN SMYTH
HALL OF THE VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY FOR
DR. CHARLES IRVIN RICH**

WHEREAS, Dr. Charles Irvin Rich was a Distinguished University Professor of agronomy, soil science and mineralogy in the department of Agronomy at Virginia Tech; and

WHEREAS, Dr. Rich was in the first group of Virginia Tech faculty honored as University Distinguished Professors in 1969; and

WHEREAS, Dr. Rich was a nationally and internationally recognized expert in clay mineralogy, soil chemistry and soil-plant relationships and was a Fellow in three national scientific societies; and

WHEREAS, Dr. Rich contributed to his field through the education and mentoring of numerous undergraduate and graduate students; and

WHEREAS, Dr. Pa Ho Hsu, a 1957 alumnus of the College of Agriculture and Life Sciences, receiving his master's degree in Agronomy, has made a generous provision for the benefit of the Department of Crop and Soil Environmental Sciences; and

WHEREAS, Dr. Hsu wishes that a permanent tribute be made in honor of Dr. Charles I. Rich that will recognize his academic legacy;

NOW, THEREFORE BE IT RESOLVED that, as an enduring tribute to Dr. Charles I. Rich, and in appreciation to Dr. Pa Ho Hsu, the conference room located on the third floor of Smyth Hall will be named the Charles I. Rich Conference Room.

RECOMMENDATION:

That the above resolution naming **The Charles I. Rich Conference Room** be approved.

March 24, 2014

Summary

Emeriti Faculty Resolutions (5)

March 24, 2014

College of Agriculture and Life Sciences

Eleanor Schlenker Professor Emerita of Human Nutrition, Foods and Exercise

College of Engineering

Robert E. Taylor Associate Professor Emeritus of Industrial and
Systems Engineering

College of Science

Klaus Elgert Professor Emeritus of Immunology

Pamplin College of Business

G. Rodney Thompson Professor Emeritus of Finance

Office of the Vice President for Information Technology

Anne Moore Associate Vice President Emerita of Learning Technologies

RESOLUTION FOR EMERITA STATUS

WHEREAS, beginning in 1988 and continuing for 19 years Dr. Eleanor Schlenker faithfully served Virginia Tech, as a faculty member and as department head (1988-1998) in the Department of Human Nutrition, Foods and Exercise in the College of Agriculture and Life Sciences; and continued six years of part-time service with Cooperative Extension; and

WHEREAS, she made significant contributions to the understanding of nutrition through three editions of her textbook Nutrition and Aging, written for advanced students and translated into Spanish for South American audiences (McGraw-Hill); three editions of Williams Essentials of Nutrition and Diet Therapy for degree nursing students (Elsevier); served as editorial board member for the Journal of Nutrition in Gerontology and Geriatrics; and was the first editor of the quarterly Extension publication Living Well, recognized for excellence by the National Extension Association of Family and Consumer Sciences; and

WHEREAS, she served her professional community within the Academy of Nutrition and Dietetics (formerly the American Dietetic Association), by holding positions on the Council on Practice, the Committee on Health Care Reform and renewal of the Older Americans Act, the Review Committee for Position Papers, and as liaison to the National Council on the Aging, the National Voluntary Organizations for Independent Living for the Elderly; and serving as chair of the Gerontological Nutrition Section; and

WHEREAS, while department head she successfully led the accreditation of the undergraduate dietetics program and dietetic internship; facilitated the merger of the Department of Human Nutrition and Foods and the Exercise Science program resulting in a smooth transition and on-time graduation for students; and managed a ten-year growth in undergraduate enrollment from less than 100 to nearly 500 students; and

WHEREAS, with dedication, she taught undergraduate and graduate courses including Nutrition Across the Lifespan, Community Nutrition, Nutrition and Aging, and an undergraduate seminar, with emphasis on professional standards and student learning as applied to realistic professional situations; and

WHEREAS, within Virginia Cooperative Extension she implemented a community- and church-based diabetes education program with rigorous standards of evaluation that has attracted over \$2M in funding from the Obici HealthCare Foundation, Virginia Department of Health, and National Institutes of Health;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors recognizes Dr. Eleanor Schlenker for her distinguished service to the university with the title Professor Emerita of Human Nutrition, Foods and Exercise.

RECOMMENDATION:

That the above resolution recommending Dr. Eleanor Schlenker for emerita status be approved.

March 24, 2014

RESOLUTION FOR EMERITUS STATUS

WHEREAS, beginning in 1967 and continuing for seven years while rising to the rank of associate professor with tenure, Dr. Robert Taylor faithfully served Virginia Tech as a faculty member in the Department of Industrial and Systems Engineering (ISE) in the College of Engineering; and

WHEREAS, he made significant contributions to the understanding of simulation and quantitative analysis in the field of management decision making in complex industrial systems; and

WHEREAS, he had an intense student focus and co-authored important textbooks with J.W. Schmidt, Marvin H. Agee, and Virginia Tech President Emeritus Paul E. Torgersen; and

WHEREAS, after leaving Virginia Tech in 1974 he ably served his profession in positions of increasing leadership and authority at the University of Missouri, Westmoreland Coal Company, culminating in positions as Executive Vice President of Engineering at CDI Engineering Group and then as Vice President of Operations at VTLS; and

WHEREAS, he faithfully served the College of Engineering on the Committee of 100 and Department of Industrial and Systems Engineering as chair of the ISE Advisory Board during his years away from Virginia Tech; and

WHEREAS, he returned to Virginia Tech for 12 additional years beginning in 2001 as a research professor to assist in the development of the highly prestigious Center for High Performance Manufacturing (CHPM), first as assistant director and then as director; and

WHEREAS, with dedication, he mentored and nurtured students and new faculty members; and

WHEREAS, he developed a strong network of external support for CHPM among the leading manufacturers in the state of Virginia and forged strong new partnerships with the Virginia Tech Office of Economic Development; and

WHEREAS, he provided a total of 19 years of dedicated service to Virginia Tech at the department, college, and university levels;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors recognizes Dr. Robert E. Taylor for his distinguished service to the university with the title Associate Professor Emeritus of Industrial and Systems Engineering.

RECOMMENDATION:

That the above resolution recommending Dr. Robert E. Taylor for emeritus status be approved.

March 24, 2014

RESOLUTION FOR EMERITUS STATUS

WHEREAS, Dr. Klaus D. Elgert faithfully served Virginia Tech for 39 years in the College of Science, beginning in 1974; and

WHEREAS, as a member of the faculty in the Department of Biological Sciences, he has taught the flagship undergraduate course in Immunology and Immunology Laboratory and advanced courses in immunology for graduate students; and

WHEREAS, he has won four Department of Biological Sciences Teaching Awards and two College of Science Teaching Awards; and

WHEREAS, he has mentored three undergraduate honors theses, over 50 undergraduate research students, 11 Masters and 10 Ph.D. students and four post-doctoral appointees and served on multiple graduate advisory committees in Biological Sciences and other departments; and

WHEREAS, he has authored and co-authored over 70 peer reviewed publications and a widely adopted textbook on immunology (two editions and two printings) and presented multiple papers at regional, national, and international science conferences, and received research funding from a wide variety of sources; and

WHEREAS, he has served on multiple departmental, college and university committees, reviewed submitted papers for multiple professional peer reviewed journals, reviewed grant proposals for local, regional, national and international funding sources to support his research;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors recognizes Dr. Klaus D. Elgert for his service to the university with the title of Professor Emeritus of Immunology.

RECOMMENDATION:

That the above resolution recommending Dr. Klaus Elgert for emeritus status be approved.

March 24, 2014

RESOLUTION FOR EMERITUS STATUS

WHEREAS, beginning in 1982 and continuing for 31 years, Dr. G. Rodney Thompson faithfully served Virginia Tech as a faculty member in the Department of Finance in the Pamplin College of Business; and

WHEREAS, he made significant contributions to the understanding of finance through his work in financial and international markets focusing on primary securities pricing and transitional markets; and

WHEREAS, he ably served the academic financial community as a leader, serving as president and board member of the Southern Finance Association as well as serving on numerous committees of the Financial Management Association and the Eastern finance Association; and

WHEREAS, he ably served the university community as a pioneering leader of study abroad programs, wherein over a 20-year period he led over 1,100 students in 40 different programs to at least 20 different countries in Africa, Asia, and Europe, being awarded the University's Excellence in International Education Alumni Award, in 2006; and

WHEREAS, he supported financial research as a conference organizer, reviewer for financial journals, and has presented his research internationally in venues in Turkey, Russia, and the People's Republic of China; and

WHEREAS, with dedication, he taught a wide variety of undergraduate and graduate courses ranging across the full financial curriculum, being awarded the William E. Wine Award for Teaching Excellence in 1988; and

WHEREAS, he advised numerous students on master's and doctoral dissertations and helped them develop successful careers; and

WHEREAS, he provided many years of distinguished contributions to the department, college, and university through dedicated service on numerous committees;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors recognizes Dr. G. Rodney Thompson for his distinguished service to the university with the title Professor Emeritus of Finance.

RECOMMENDATION:

That the above resolution recommending Dr. G. Rodney Thompson for emeritus status be approved.

March 24, 2014

RESOLUTION FOR EMERITA STATUS

WHEREAS, beginning in 1995 and continuing for 18 years, Dr. Anne H. Moore faithfully served Virginia Tech as the Associate Vice President for Learning Technologies in the Vice President for Information Technology's organization; and

WHEREAS, she was the founding chair of the Electronic Campus of Virginia, a cooperative effort of public and private institutions in the Commonwealth focused on providing e-learning to Virginians; and

WHEREAS, she worked alongside colleagues to coordinate the award winning Faculty Development Institute creating and supporting robust environments for teaching, learning, and discovery for faculty and students that are grounded in sound principles of learning, and in a thorough knowledge of integrating technology for effectiveness and efficiency; and

WHEREAS, she led the Center for Innovation in Learning that provided over \$3M in grants to faculty, since 1996, supporting more than 120 strategic instructional projects and sponsoring the XCaliber Awards to recognize outstanding contributions in integrating technology in learning activities; and

WHEREAS, in cooperation with the Virginia Tech Graduate School she developed the Graduate Education Development Initiative, designed to address the professional development concerns of 21st-century graduate students at Virginia Tech; and

WHEREAS, she played an instrumental role in the combining of the Learning Technologies and the Institute for Distributed and Distant Learning units into the new Technology-enhanced Learning and Online Strategies (TLOS) organization, which is designed to collaborate with colleges and departments on advancing technology-enhanced learning by incentivizing and supporting highly effective distance learning programs, online content for on-campus courses, and hybrid courses; and

WHEREAS, during her tenure at Virginia Tech she has worked tirelessly to leverage an array of high caliber activities, services, programs, and technology that have directly enhanced learning and significantly benefited the students' educational experience; and

WHEREAS, she provided many years of distinguished contributions to the information technology organization and university through dedicated service on numerous committees;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors recognizes Dr. Anne H. Moore for her distinguished service to the university with the title Associate Vice President Emerita of Learning Technologies.

RECOMMENDATION:

That the above resolution recommending Dr. Anne H. Moore for emerita status be approved.

March 24, 2014

Summary

Endowed Professorships and Fellowships (6)

March 24, 2014

College of Agriculture and Life Sciences

Dennis Dean	J.B. Stroobants Professor
Katharine Knowlton	Colonel Horace E. Alphin Professor of Dairy Science
Rick Rudd	Virginia Cooperative Extension Professor of Excellence in Community Viability

College of Engineering

Mehdi Ahmadian	Dan Pletta Professorship
Hesham Rakha	Samuel Reynolds Pritchard Professorship
Dwight D. Viehland	Jack E. Cowling Endowed Professorship

ENDOWED PROFESSORSHIP

J. B. Stroobants Endowed Professorship

The J. B. Stroobants Professorship of Biotechnology was established in 1986 by a gift from Alphonse and Maria Stroobants of Bedford County to endow the professorship in the name of his father, J. B. Stroobants. The professorship was established in the College of Agriculture and Life Sciences to support research advancing knowledge and discoveries in biotechnology. The College's Honorifics Committee first recommended the appointment of Dr. Dennis Dean as the J. B. Stroobants Professor of Biotechnology in 2007.

During his first appointment as the J. B. Stroobants Professor, Dr. Dennis Dean has co-authored more than 30 research articles in top tier refereed journals such as the Proceedings of the National Academy of Sciences, National Association of Science, Biochemistry, Journal of Bacteriology, Journal of Biological Chemistry, and Journal of the American Chemical Society.

Dr. Dean continues to garner international recognition for his research. He has delivered invited talks at numerous international scientific meetings, such as the Gordon Summer Research Conferences.

Dr. Dean has generated a significant level of extramural funding for research through grants from the National Institutes of Health, National Science Foundation, and the Department of Education. He continues to serve as a major professor for graduate students.

Dr. Dean has served as advisor for numerous undergraduate students and was co-primary investigator on a successful application to the National Science Foundation for "Broadening Opportunities for Nontraditional Students in Biomolecular Sciences."

Dr. Dean has served on multiple grant review panels for the National Science Foundation and was elected to the Publications Committee of the American Society for Biochemistry and Molecular Biology. He has also served on the editorial board of the Journal of Biological Chemistry.

Dr. Dean helped provide oversight for the design and construction of the Virginia Tech Carilion Research Institute in Roanoke, VA. He has served the university as director of the Fralin Life Sciences Institute, as executive director, Virginia Bioinformatics Institute, and as a member of the search committee for 16th President of Virginia Tech.

Dr. Dean was appointed University Distinguished Professor during his prior term.

RECOMMENDATION:

That Dennis Dean be reappointed as the J.B. Stroobants Professor for a five-year term effective March 24, 2014 with a salary supplement as provided by the endowment and, if available, with funds from the eminent scholars match program.

March 24, 2014

ENDOWED PROFESSORSHIP

Colonel Horace E. Professorship in Dairy Science

The Colonel Horace Alphin Professorship in Dairy Science was established in 2013 through a gift from Colonel Alphin. Colonel Alphin was a 1934 graduate of the Department of Dairy Science at Virginia Tech whose life and career were positively impacted by departmental faculty, particularly Professor Paul M. Reaves. Colonel Alphin followed a distinguished career in the military with a second career in hospital administration. Dean Alan Grant, on the recommendation of the Honorifics Committee of the College of Agriculture and Life Sciences, has nominated Dr. Katharine Knowlton to be appointed to the Colonel Horace E. Alphin Professorship in Dairy Science.

Dr. Knowlton was promoted to the rank of professor in 2010. She received her Ph.D. in animal nutrition from the University of Maryland after MS and BS studies at Michigan State University and Cornell University. Since joining the faculty in 2000, Dr. Knowlton has established herself as a caring and highly valued member of the Department of Dairy Science and the College of Agriculture and Life Sciences. She takes the spirit and missions of the land-grant university to heart as evidenced by her compassion and commitment to undergraduate student teaching, advising, and development. Reflecting her passion for the undergraduate program, in addition to teaching four courses, she is currently the Academic Coordinating Counselor for the dairy science undergraduate program and advisor to the Dairy Club. Dr. Knowlton has great success as a team-builder among colleagues. This is evident in the more than \$9M she has generated as a primary investigator or co-primary investigator.

She has advised six Ph.D. and 11 MS students and is currently mentoring a Ph.D., MS and post-doctoral student. Dr. Knowlton has been recognized for excellence in teaching, advising, and scholarship. She has published 66 refereed scientific papers and book chapters. Notable awards include the College of Agriculture and Life Sciences Certificate of Teaching Excellence, Ag Woman of the Year, American Dairy Science Association Cargill Young Scientist, and American Dairy Science Association Foundation Scholar Lecture Award.

Dr. Knowlton has partnered with private, state, and federal agencies to foster cooperation in the area of reducing environmental impact of the dairy industry. The Waste Solutions Forum that she created and championed provided a mechanism for diverse groups to come together resulting in a variety of external funding opportunities and several large grants from both the dairy and poultry industries. In summary, Dr. Knowlton's record of achievement in teaching, advising, research, and scholarship is outstanding and she is a superb example of faculty excellence at Virginia Tech.

RECOMMENDATION:

That Dr. Katharine F. Knowlton be appointed as the Colonel Horace E. Alphin Professor of Dairy Science with a five-year term through June 30, 2019 with a salary supplement provided by the endowment and, if available, with funds from the eminent scholars match program.

March 24, 2014

ENDOWED PROFESSORSHIP

Virginia Cooperative Extension Professor of Excellence in Community Viability

The Chair of Excellence for Community Viability Endowed Fund was established in 2004 by an anonymous donor in honor of R. Michael Chandler, Donald P. Lacy, and J. Douglas McAlister in recognition of their services to the Virginia Cooperative Extension. The fund and professorship were established in the College of Agriculture and Life Sciences to help revitalize Virginia Cooperative Extension's community development services and to ensure the continued dedication to a strong, permanent community development role for Virginia Cooperative Extension. The college honorifics committee recommended the appointment of Dr. Rick Rudd as the Virginia Cooperative Extension Professor of Excellence in Community Viability in 2009.

Dr. Rudd has gained national and international recognition in rural leadership development and viable rural communities. He has worked with the Farm Bureau in two states to initiate efforts to create viable rural communities. While at the University of Florida he worked to create the "Strengthening the Voice" campaign to provide leadership programs for rural leaders in 67 counties. This program for local leaders was adapted and is currently used in Virginia communities. Dr. Rudd has also worked to develop leadership programs for rural youth including three state-wide programs built around the developmental needs of adolescents. These programs significantly enhance the long term viability of rural communities.

Dr. Rudd received his Ph.D. from Virginia Tech in vocational and technical education and began his career as an associate professor at the University of Florida. Dr. Rudd has co-authored three books, written numerous scholarly publications, and has presented at more than 120 professional and academic workshops, Extension training sessions, and international, national, and regional events. Additionally, he has served as a principal investigator, co-principal investigator, or co-director of programs, research projects, and contracts worth more than \$1.5M. He has an outstanding record as an educator and leader of the Community Viability program at Virginia Tech. Dr. Rudd currently holds the rank of professor and serves as department head in Agricultural and Extension Education.

Dr. Rudd's record of achievement, scholarship and leadership warrants his reappointment to this endowed professorship and his vision clearly addresses the intent of the endowment.

RECOMMENDATION:

That Dr. Rick Rudd be reappointed the Virginia Cooperative Extension Professor of Excellence in Community Viability for a renewable five-year term, effective June 10, 2014, with a salary supplement as provided by the endowment and, if available, funds from the eminent scholars match program.

March 24, 2014

ENDOWED PROFESSORSHIP

Dan Pletta Professorship

The Dan Pletta Professorship in the College of Engineering was established in 1987 from a gift from the late Bruce W. Borhauer.

Dr. Rob Parker, Head of the Department of Mechanical Engineering, has nominated Dr. Mehdi Ahmadian to this endowed position, concurring with the recommendation of the Mechanical Engineering Honorifics Committee.

Dr. Ahmadian has been an outstanding member of the Department since 1995, and has become a distinguished scholar and educator. His research, publication record, and leadership have earned him worldwide standing in his field of vibration and vehicle dynamics.

Before joining Virginia Tech, Dr. Ahmadian held engineering and managerial positions with the Lord Corporation and the General Electric Company. At Virginia Tech, he holds the position of director of the Center for Vehicle Systems and Safety, and the Railway Technologies Laboratory. He is the founding director of the Center for Vehicle Systems and Safety, Railway Technologies Laboratory, the Virginia Institute for Performance Engineering and Research, and the Advanced Vehicle Dynamics Laboratory.

Dr. Ahmadian has authored more than 120 archival journal publications and more than 200 conference publications. He has made more than 200 technical presentations in topics related to advanced technologies for ground vehicles. He holds eight U.S. and international patents, and he has edited four technical volumes. He has worked with other faculty members on research programs totaling \$16.7M, and has been personally responsible for \$13.6M of research funding. He has advised 20 Ph.D. graduate students to completion.

He currently serves as editor for the International Journal of Vehicle System Dynamics, editor-in-chief of Shock and Vibration journal, and editor-in-chief for Advances in Automobile Engineering. He also serves on the Editorial Board of the Journal of Smart Materials Research, Advances in Mechanical Engineering, and Mechanical Engineering. In the past, he has served as associate editor for the American Society of Mechanical Engineers Journal of Vibration and Acoustics (1989 – 1996), the American Institute of Aeronautics and Astronautics Journal (2000 – 2008), and the Journal of Shock and Vibration (2003 – 2011). Dr. Ahmadian is a Fellow of the American Society of Mechanical Engineers, a Fellow of the Society of Automotive Engineers International, and an Associate Fellow of the American Institute for Aeronautics and Astronautics. He is the recipient of the 2008 Society of Automotive Engineers Forest R. McFarland Award.

Dr. Ahmadian is an outstanding educator as well. He regularly teaches undergraduate and graduate courses, and is highly regarded by his students. He leads senior undergraduate design teams, and supervises undergraduate research programs.

RECOMMENDATION:

That Dr. Mehdi Ahmadian be appointed the Dan Pletta Professor for a renewable five-year term, effective April 10, 2014, with a salary supplement and operating budget as provided by the endowment and, if available, with funds from the eminent scholars match program.

March 24, 2014

ENDOWED PROFESSORSHIP

Samuel Reynolds Pritchard Professorship

Dr. Richard Benson, Dean of the College of Engineering, has nominated Dr. Hesham A. Rakha to hold the Samuel Reynolds Pritchard Professorship in the College of Engineering, concurring with the College of Engineering Honorifics Committee. The nomination is likewise recommended by the Honorifics Committee of the Via Department of Civil and Environmental Engineering and Department Head, Dr. W. Samuel Easterling. The Samuel Reynolds Pritchard Professorship was established by the late Walter A. Buchanan, Sr. in 1992 in honor of Pritchard, who served as the dean of the College of Engineering from 1918 to 1928. The professorship recognizes excellence in engineering research.

Dr. Rakha is a multi-talented, nationally, and internationally recognized faculty member who brings significant visibility to Virginia Tech. He is a truly remarkable scholar, having published 123 refereed journal articles, five book chapters, and 145 refereed conference publications that have collectively been cited over 3,050 times. Dr. Rakha's recognition with two recent Best Scientific Paper Awards at the ITS World Congress in 2012 and 2013 speak to the high quality of his work and international visibility. It should be noted that this congress has over 20,000 participants each year.

Dr. Rakha's commitment to graduate students is evident given his completion as chair or co-chair of 14 Ph.D. and 33 MS students. His strong upward trajectory is evident as he is currently advising 11 Ph.D. and 4 MS students as chair or co-chair. Dr. Rakha supports his research team through an exceptionally strong funded research base. To date, he has been involved with nearly \$33M in sponsored research with a personal share of \$13.5M.

Dr. Rakha is a valued colleague and dedicated university citizen. He is committed to his teaching and student advising. Dr. Rakha likewise contributes in significant ways to the service mission of the university and his profession.

Dr. Rakha received a bachelor's degree in civil engineering with honors from Cairo University in Egypt. He received master's and doctoral degrees in civil and environmental engineering from Queen's University in Kingston, Canada.

In summary, Dr. Rakha is an internationally recognized scholar and researcher in the field of civil engineering. He has been very successful in securing interdisciplinary funding which has benefitted the greater university.

RECOMMENDATION:

That Dr. Hesham A. Rakha be appointed the Samuel Reynolds Pritchard Professor for a renewable five-year term, effective April 10, 2014, with a salary supplement and operating budget as provided by the endowment and, if available, with funds from the eminent scholars match program.

March 24, 2014

ENDOWED PROFESSORSHIP

Jack E. Cowling Endowed Professorship

Dean Richard Benson has nominated Professor Dwight D. Viehland to the Jack E. Cowling Professorship in the College of Engineering, concurring with the recommendations of the Honorifics Committee of Materials Science and Engineering department and the Honorifics Committee of the College of Engineering. The Jack E. Cowling Professorship was established as part of the bequest of the late John E. "Jack" Cowling, who graduated from Virginia Tech in Chemical Engineering in 1939.

After completing his doctorate in solid state science at Pennsylvania State University in 1991, Professor Viehland joined the Materials Science and Engineering Department at the University of Illinois at Urbana-Champaign where he served as a research group leader in structure-property investigations of piezoelectric ceramics.

Professor Viehland joined the faculty at Virginia Tech in 2001. He is an experimental solid state scientist investigating phase transitions in ceramics and physical phenomena like ferroelectricity, piezoelectricity, magnetostriction, and magnetoelectricity. Since joining Virginia Tech, Professor Viehland has been a pioneer in the development of magneto-electric composites. These new composites have potential for many applications for energy conversion, energy harvesting, data storage, and sensors. In sensor applications, the composites eliminate the need for cryogenic cooling and increase sensitivity to magnetic fields by many orders of magnitude over conventional materials. Devices based upon the composites developed by Dr. Viehland's group are currently being investigated for important defense applications including guidance, persistent surveillance, and detection of low-frequency magnetic fields.

Dr. Viehland's scholarly output is prodigious. While graduating 16 Ph.D. students, he has published 449 papers, and accumulated well over 15,000 citations. According to the Thomson Reuters Web of Science database, he currently has an h-index of 54. This measure of impact is nearly twice the average in materials science for researchers with the same number of publications. Dr. Viehland has been awarded an Office of Naval Research Young Investigator award, multiple "best paper" awards, and Virginia Tech's Alumni Research Award in 2007.

Professor Viehland has served as head of the Electronics Division of the American Ceramic Society, trustee to the American Ceramics Society, as an associate editor for the Journal of the American Ceramics Society, and on the Steering Committee of the Institute of Electrical and Electronics Engineers Ferroelectrics Society. He presently serves on the Virginia Tech University Senate, the Materials Science and Engineering Promotion and Tenure Committee, and the Internal Advising Committee.

RECOMMENDATION:

That Dr. Dwight Viehland be appointed the Jack E. Cowling Professor for a renewable five-year term, effective April 10, 2014, with salary supplement and annual operating budget as provided by the endowment and if available, with funds from the eminent scholars match program.

March 24, 2014

RESOLUTION TO APPROVE CHANGE IN NAME OF THE COMMONWEALTH PROFESSORSHIPS TO ROLLS ROYCE COMMONWEALTH PROFESSORSHIPS

WHEREAS, the Commonwealth of Virginia entered into a strategic partnership with Rolls Royce Group plc in 2007 that included the establishment by Rolls Royce of a jet engine manufacturing plant in Virginia and educational and research opportunities throughout the Commonwealth and with Virginia Tech, the University of Virginia, Virginia State University, and the Virginia Community College System; and

WHEREAS, to advance and support the partnership between Rolls Royce and the Commonwealth of Virginia, the Virginia Economic Development Partnership agreed to create nine endowed professorships distributed equally among Virginia Tech's College of Engineering, and the University of Virginia's School of Engineering and Applied Science, and the University of Virginia's School of Commerce; and

WHEREAS, Virginia Tech has established these endowed professorships and the Board of Visitors appointed accomplished professors to these named professorships in November of 2013; and

WHEREAS, to recognize the strong partnership between the Commonwealth of Virginia, Virginia Economic Development Partnership and Rolls Royce Group plc, which made these professorships possible, Virginia Tech proposes to change the name of the professorships in the College of Engineering;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Visitors approve that the name of the three professorships be changed from the Commonwealth Professor of Advanced Manufacturing to Rolls Royce Commonwealth Professorship of Advanced Manufacturing; the Commonwealth Professorship of Marine Propulsion to Rolls Royce Commonwealth Professorship of Marine Propulsion; and the Commonwealth Professor for Aerospace Propulsion Systems to Rolls Royce Commonwealth Professorship of Aerospace Propulsion Systems; and

BE IT FURTHER RESOLVED, that as voted by the Board of Visitors on November 18, 2013, Jaime Camelio is the Rolls Royce Commonwealth Professor of Advanced Manufacturing, and Eric Paterson is the Rolls Royce Commonwealth Professor of Marine Propulsion, and as voted by the Board of Visitors on November 5, 2012, Srinath Ekkad is the Rolls Royce Commonwealth Professor for Aerospace Propulsion Systems.

RECOMMENDATION:

That the Board of Visitors approve the change in name and confirm the appointments to the Rolls Royce Commonwealth Professorships.

March 24, 2014

Summary

Faculty Research Leaves (76)

2014 – 2015

Study Research Leave (17) (one-half salary for up to one year)

College of Agriculture and Life Sciences (0)

College of Architecture and Urban Studies (1)

College of Liberal Arts and Human Sciences (3)

College of Natural Resources and Environment (1)

College of Engineering (8)

College of Science (4)

Pamplin College of Business (0)

University Libraries (0)

Virginia-Maryland Regional College of Veterinary Medicine (0)

Research Assignment (59) (full salary for one semester)

College of Agriculture and Life Sciences (4)

College of Architecture and Urban Studies (9)

College of Liberal Arts and Human Sciences (14)

College of Natural Resources and Environment (3)

College of Engineering (14)

College of Science (8)

Pamplin College of Business (5)

Virginia-Maryland Regional College of Veterinary Medicine (1)

University Libraries (1)

FACULTY RESEARCH LEAVES 2014 – 2015

Virginia Tech provides tenured faculty, and faculty on continued appointment, with opportunities that include paid leave for intensive study or research that advances the individual's profession and contributions to the university.

The following faculty members are requesting study-research leave (one-half salary for up to one year) for the purpose and period of time specified:

College of Architecture and Urban Studies (1)

Kelsch, Paul, associate professor, Department of Landscape Architecture, academic year 2014-2015: to conduct research on the Theodore Roosevelt and Lyndon Baines Johnson Memorials as a part of a larger body of work for a book on the role of nature in the development of the Potomac River landscape (Dumbarton Oaks Museum, Washington, D.C.)

College of Liberal Arts and Human Sciences (3)

Abbate, Janet, associate professor, Department of Science and Technology in Society, spring 2015: to complete archival research on the history of computer science at two archives with specialized collections in the history of computing (National Capital Region).

Saffle, Michael, professor, Department of Religion and Culture, academic year 2014-2015: to conduct research at the Library of Congress, the New York Public Library, and New York Historical Society for a book-length study on American sheet music published between 1865 and 1918 (New York City, Washington, D.C.)

Taylor, Charles, professor, Department of Political Science, academic year 2014-2015: to complete the writing of a book on the entrance between 1763 and 1868 of the English working class into the political system of the United Kingdom (Guild Hall, London, U.K.)

College of Natural Resources and Environment (1)

Buehlmann, Urs, associate professor, Department of Sustainable Biomaterials, academic year 2014-2015: to develop joint research and education programs in the area of sustainable biomaterial products and manufacturing with the largest sustainable biomaterials (wood) research center in Europe (University of Bern, Switzerland).

College of Engineering (8)

Boroyevich, Dushan, professor, Department of Electrical and Computer Engineering, academic year 2014-2015: to develop an international collaboration for a new power-electronics-based electric energy infrastructure and to initiate the development of a collaborative e-learning course in power electronics (Swiss Federal Institute of Technology, Zurich Switzerland).

Chen, Ing-Ray, professor, Department of Computer Science, spring 2015: to further research in networking projects in trust and security management for military tactical networks and to gain knowledge and core competence in security and trust management of wireless mobile networks (National Cheng Kung University, Taiwan).

de la Garza, Jesus, professor, Department of Civil and Environmental Engineering, spring 2015: to conduct research on project management tools to improve construction project scheduling and control tasks (Stanford University, CA).

Hsiao, Michael, professor, Department of Electrical and Computer Engineering, academic year 2014-2015: to investigate, propose, and develop strategies to verify correct behavior of computer systems in an industrial setting (Intel, CA; Microsoft, WA).

McNair, Lisa, associate professor, Department of Engineering Education, academic year 2014-2015: to analyze and publish the results of research on reflective practice and professional identity for engineering graduates and implement findings and products at partner institutions (National Science Foundation; Stanford University, CA; KTH Royal Institute of Technology, Stockholm, Sweden).

Reed, Jeffrey, professor, Department of Electrical and Computer Engineering, academic year 2014-2015: to develop new cyber security techniques for the creation of the Internet-of-Things (IoT), an emerging technology that will incorporate intelligence and connectivity into many common items (Reston, VA).

Schaumont, Patrick, associate professor, Department of Electrical and Computer Engineering, academic year 2014-2015: to conduct research on the design and implementation aspects of security in embedded systems in hardware and software (National Institute of Information and Communications Technology, Tokyo, Japan).

Yang, Yaling, associate professor, Department of Electrical and Computer Engineering, academic year 2014-2015: to conduct research in the areas of wireless communications, health care systems, and computer network security (City University of Hong Kong; University of Electronic Science and Technology, China).

College of Science (4)

Ball, Joseph, professor, Department of Mathematics, academic year 2014-2015: to continue research on models of computing contractions and function theory on an algebraic curve (Ben-Gurion University, Israel).

Elgart, Alex, associate professor, Department of Mathematics, academic year 2014-2015: to conduct research on random operators which describe an electron moving in a medium with random impurities (University of California, Irvine).

Linnell, Peter, professor, Department of Mathematics, fall 2014: to conduct collaborative research on a number of statements about restrictions on possible values of numbers and to complete documentation on the topic (Universität Göttingen Mathematisches Institut, Germany).

Tideman, T. Nicholas, professor, Department of Economics, spring 2015: to write a book on economic justice tentatively entitled, “Liberty, Justice, and Decency: Framework for a World that Works” (Blacksburg, VA).

The following faculty members are requesting research assignments (full salary for one semester) for the purpose and period of time specified:

College of Agriculture and Life Sciences (4)

Davis, George, professor, Department of Agricultural and Applied Economics, fall 2014: to conduct research on how time use affects health (e.g., food preparation at home, exercise) and to complete a book (Oxford University, U.K.).

Gillaspy, Glenda, professor, Department of Biochemistry, fall 2014: to conduct research to identify and to understand new genetic mechanisms that regulate energy signaling in plants (Instituto Gulbenkian de Ciencia, Portugal).

Grange, Robert, associate professor, Department of Human Nutrition, Foods, and Exercise, spring 2015: to conduct research on the regulation of satellite cells in skeletal muscle of dogs treated or not treated with gene therapy (University of Washington, WA).

Thompson, Theresa, associate professor, Department of Biological Systems Engineering, spring 2015: to explore, develop, and assess experiential learning techniques in the biological systems engineering curriculum with the goal of improving student learning (Blacksburg, VA).

College of Architecture and Urban Studies (9)

Cook, Brian, professor, Center for Public Administration and Policy in the School of Public and International Affairs, fall 2014: to conduct a cross-national analysis on the impact of statutory trade secret protections on policy outcomes in environmental, health, and safety regulation (Portland State University).

Dugas, David, associate professor, School of Architecture and Design, fall 2014: to continue working on a series of drawings as well as pursuing gallery and exhibition opportunities (Blacksburg, VA).

McCoy, Andrew, associate professor, Department of Building Construction, spring 2015: to research strategies by which The International Journal of Construction Education and Research, the leading scholarly journal in the field of construction management, can further develop its impact on scholarship and practice (Blacksburg, VA).

Miller, Patrick, professor, School of Architecture and Design, fall 2014: to conduct research on green infrastructure programs to better understand how individual green installations work as an urban ecosystem and contribute to the environmental health and quality of life in cities (Baltimore, New York, Philadelphia, Portland, Seattle).

Pearce, Annie, associate professor, Department of Building Construction, fall 2014: to conduct research on exemplar projects in which adaptive and resilient infrastructure has been incorporated as part of new and existing facilities and to document implementation barriers and best practices (Blacksburg, VA).

Setareh, Mehdi, professor, School of Architecture and Design, spring 2015: to conduct research on the vibration serviceability of structures and to study the effects of human-structure interactions, and the evaluation of vibrations to determine better specification of tolerable limits (Blacksburg, VA).

Sharma, Akshay, associate professor, School of Architecture and Design, fall 2014: to conduct research on alternative sources of energy for people living off the energy grid in emerging economies and to continue research on a financial literacy education system for women who cannot read or write and are engaged in micro-financing (Ministry of Women and Child Development, India).

Thompson, Steven, associate professor, School of Architecture and Design, fall 2014: to conduct research on the parallels between the development of the Renaissance terra firma villa of the Venetian Republic and the development of the New World plantation villa in South Carolina and Virginia (South Carolina).

Tucker, Lisa, associate professor, School of Architecture and Design, spring 2015: to write a book on the contributions made by the Architect's Small House Service Bureau from 1914 – 1937 and to submit a proposal to the Routledge Architecture Press (St. Paul, MN).

College of Liberal Arts and Human Sciences (14)

Crone, William, professor, School of Performing Arts and Cinema, spring 2015: to create digital recordings of 20th and 21st century works for solo, unaccompanied trombone by American composers and to make the recordings available for teaching and public use (Blacksburg, VA).

Evia, Carlos, associate professor, Department of English, spring 2015: to conduct research for the writing of a book on the topic of the utility of user manuals to convey technical information in business and other settings (Blacksburg, VA).

Garrison, James, professor, Department of Learning Sciences and Technology, spring 2015: to complete a book manuscript reflecting on John Dewey's 1916 classic *Democracy and Education* titled *Democracy and Education Reconsidered* to be published in early 2016 (Blacksburg, VA).

Jones, Brett, associate professor, Department of Learning Sciences and Technology, fall 2014: to analyze data collected regarding motivation and persistence in K-12 and college students and to write manuscripts to submit to peer-reviewed journals (Blacksburg, VA).

Kincade, Doris, professor, Department of Apparel, Housing, and Resource Management, fall 2014: to complete manuscripts for publication that document manufacturing facilities for apparel, textile, and home furnishings companies Blacksburg, VA).

Leech, Irene, associate professor, Department of Apparel, Housing, and Resources Management, spring 2015: to conduct research on consumer understanding of the smart electric grid for reliable, efficient, secure, and sustainable consumer benefits (U.S. Department of Energy; Smart Grid Consumer Collaborative, Atlanta, GA).

McGrath, Robert, associate professor, Department of Theatre and Cinema, spring 2015: to create a new music theatre and symphonic theatrical work as artist in residence (University of California, Davis).

Meitner, Erika, associate professor, Department of English, spring 2015: to complete a fifth manuscript of poems and to partner with photojournalists to write documentary poems about the legacies of urban violence (Queen's University, Belfast, Ireland).

Milly, Deborah, associate professor, Department of Political Science, fall 2014: to conduct research on the factors affecting the conditions for sending and accepting health-care migrants among Asian countries including the politics and processes of setting standards under Economic Partnership Agreements for the migration and credentialing of health-care professionals, specifically nurses and care workers, from Indonesia and the Philippines to Japan (Indonesia, Philippines, Korea, Japan).

Noirot, Corinne, associate professor, Department of Foreign Languages and Literatures, spring 2015: to complete a book on the work of Jean de La Taille de Bondaroy a French renaissance poet and dramatist (France).

Ott, Walter, associate professor, Department of Philosophy, spring 2015: to complete a book on the relationship between secondary and spatial perception of philosophers from Descartes to present day (Blacksburg, VA).

Pender, Kelly, associate professor, Department of English, spring 2015: to complete a manuscript for a book about people at genetic risk for disease titled, A Rhetoric of Care for the At Risk (Blacksburg, VA).

Savla, Jyoti, associate professor, Department of Human Development, spring 2015: to conduct research to enhance existing knowledge in the field of technology and aging and to develop new applications of quantitative methods and statistics for social, behavioral, and health sciences research (University of Miami, Pennsylvania State University).

Wisnioski, Matthew, associate professor, Department of Science and Technology in Society, spring 2015: to conduct research and write chapters for a proposal for a book that investigates how efforts to make scientists and engineers into "innovators" have shaped the boundaries of the scientific enterprise in the U.S. from 1960 to present (Blacksburg, VA).

College of Natural Resources and Environment (3)

Edgar, Kevin, professor, Department of Sustainable Biomaterials, spring 2015: to write a graduate level textbook on polysaccharide chemistry for use at Virginia Tech and other venues as no textbook currently exists in this field (Blacksburg, VA).

Frimpong, Emmanuel, associate professor, Department of Fish and Wildlife Conservation, spring 2015: to develop a research program in distribution modeling, biogeography, and conservation of West African freshwater fishes (Kwame Nkrumah University of Science and Technology, Ghana).

Kolivras, Korine, associate professor, Department of Geography, spring 2015: to conduct research on geographic dimensions of the emergence of valley fever (coccidioidomycosis) in the western United States and to prepare publications and grant proposals for submission (Arizona, California).

College of Engineering (14)

Bish, Douglas, associate professor, Department of Industrial and Systems Engineering, spring 2015: to research the management of health care systems specifically focused on hospital evacuations and hospital risk assessment; hospital surge planning; and pediatric emergency planning (Roanoke, VA).

Camelio, Jaime, associate professor, Department of Industrial and Systems Engineering, fall 2014: to establish international research collaborations between manufacturing groups at the University of Nottingham and Virginia Tech and to research other successful programs to define a plan for the manufacturing program for the next five years at Virginia Tech (University of Nottingham, U.K.).

Davalos, Rafael, associate professor, Department of Biomedical Engineering, spring 2015: to research the development of endoscopic-based technology that facilitates the treatment of inoperable pancreatic cancer tumors (Blacksburg, VA).

Duke, John, professor, Department of Engineering Science and Mechanics, fall 2014: to research and develop procedures to reliably assess the health of transportation structures (primarily bridges) and to identify best practices for the identification and reporting of critical findings using data driven, risk based procedures (Federal Highway Administration, McLean, VA).

Edwards, Stephen, associate professor, Department of Computer Science, spring 2015: to conduct research in computer science education using systematically developed drill-and-practice exercises to continuously assess student learning (Blacksburg, VA).

Ellis, Michael, associate professor, Department of Mechanical Engineering, fall 2014: to develop a textbook that will encompass a comprehensive approach to building energy applications that emphasize engineering fundamentals and system integration (Blacksburg, VA).

Hou, Thomas, professor, Department of Electrical and Computing Engineering, spring 2015: to conduct research on several fundamental problems in wireless networking, to develop proposals, and to plan the writing of a book on military communications (Blacksburg, VA).

Kriz, Ronald, associate professor, Department of Engineering Science and Mechanics, fall 2014: to research programming in Java to update a rapid application development tool that researchers use to create, maintain, and archive computer simulation programs and results (Blacksburg, VA).

Moen, Christopher, associate professor, Department of Civil and Environmental Engineering, spring 2015: to conduct research into engineering programs that emphasize entrepreneurship and research commercialization (Columbia University, Cornell University Technology Campus, New York).

Murali, T. M., associate professor, Department of Computer Science, spring 2015: to conduct research on experimental methods used to collect genome sequence data and the analysis techniques being used to study these data (Massachusetts Institute of Technology, Harvard University).

Orlowski, Marius, professor, Department of Electrical and Computer Engineering, fall 2014: to conduct research on electrical resistance switches called memristive devices that can store and process information that exceeds conventional integrated circuit technology in computing (Politecnico di Torino and Politecnico de Milano, Italy).

Pickrell, Gary, professor, Department of Materials Science and Engineering, fall 2014: to write a book on advanced manufacturing and industrial process control called Process Health Monitoring and Validation (Blacksburg, VA).

Rajagopalan, Padma, associate professor, Department of Chemical Engineering, fall 2014: to conduct research on the experimental methods used to transform pluripotent stem cells into the cell types found in the liver and learn how to translate laboratory findings into clinical therapies (Harvard University).

Shewchuk, John, associate professor, Department of Industrial and Systems Engineering, fall 2014; to continue research on lean concepts to make residential construction safer and more efficient and to research other cutting-edge programs and activities in industrial engineering (Dalhousie University, Canada).

College of Science (8)

Barrett, John, associate professor, Department of Biological Sciences, spring 2015: to learn new analytical and programming skills necessary to use state of the art sequencing data both in the classroom and field on soil ecology and biogeochemistry (University of Colorado, Colorado State University).

Burns, John, professor, Department of Mathematics, spring 2015: to develop science based modeling algorithms specifically for model based control, optimization, and design of thermal fluid systems (Lund University, Sweden, ETH Zurich, Switzerland).

Kim, Inyoung, associate professor, Department of Statistics, spring 2015: to develop semiparametric and nonparametric statistical methods using regression splines or Gaussian/Dirichlet processes to address issues in epidemiology, environmental health, genomics, proteomics, systems biology, and information security (Yale University; Seoul University, Korea).

Norton, Anderson, associate professor, Department of Mathematics, fall 2014: to continue research on how students' mental actions form the basis for mathematical development and collaborate efforts with eminent researchers in the field (New York University).

Rossi, John, professor, Department of Mathematics, spring 2015: to continue collaborative efforts of exploring classical mathematical problems with modern applications (University of Otago, New Zealand; University of Nottingham, U.K.; University of Eastern Finland).

Santos, Webster, associate professor, Department of Chemistry, fall 2014: to learn in silico molecular modeling techniques to test, computationally, potential inhibitors developed in his lab (University of Edinburgh, U.K.).

Stevens, Ann, professor, Department of Biological Sciences, fall 2014: to move research efforts on bacterial quorum-sensing systems into an applied direction by working closely with an industry and thus enabling the exploration of new areas of investigation while helping to build a bridge between Virginia Tech and local industry (Novozymes, Salem, VA).

White, Susan, associate professor, Department of Psychology, fall 2014: to further research associated with autism spectrum disorder by analyzing eye-tracking data and learning new intervention techniques (University of Central Florida, Michigan State University, University of Copenhagen).

Pamplin College of Business (5)

Bagchi, Rajesh, associate professor, Department of Marketing, spring 2015: to continue research on the role that numbers play in decision-making within various contexts such as loyalty rewards, pricing, stock markets, and resource use such as time and money (Blacksburg, VA).

Kumar, Raman, professor, Department of Finance, spring 2015: to research stock market anomalies and how the mis-valuation of stocks contributes to the observed size and book-to-market effect of stock returns (Blacksburg, VA).

McGehee, Nancy, professor, Department of Hospitality and Tourism Management, spring 2015: to research rural tourism development at an international level (University of Aveiro, Portugal).

Perdue, Richard, professor, Department of Hospitality and Tourism Management, fall 2014: to research patterns of tourism taxation and development subsidization and the effects of such taxes and subsidies on innovation and entrepreneurship in the hospitality and tourism industry (University of Queensland, Australia; St. Gallen University, Switzerland, and Hong Kong Polytechnic).

Zobel, Christopher, professor, Department of Business Information Technology, spring 2015: to research the development of a new, more operational approach to measuring and monitoring the resilience and sustainability of communities, businesses, and other socio-technical infrastructure systems (Center for Disaster Management and Risk Reduction Technology at Karlsruhe Institute of Technology, Germany).

University Libraries (1)

Purcell, Aaron, professor, spring 2015: to complete a book project focused on building digital library programs for libraries and archives, and to complete research on the lives of Civil War soldiers at sea (Blacksburg, VA)

Virginia-Maryland Regional College of Veterinary Medicine (1)

Pierson, Frank, professor, Department of Population Health Sciences, spring 2015: to continue research on tuberculosis vaccine development and immunology and to develop international collaborations (Max Planck Institute for Infection Biology, Germany; World Health Organization, Switzerland; New Mexico State University).

RECOMMENDATION:

That the above study-research and research assignment leaves be approved as requested.

March 24, 2014

FACULTY PERSONNEL CHANGES

March 24, 2014

TEACHING AND RESEARCH FACULTY

NEW APPOINTMENTS

NAME	TITLE	DEPARTMENT	REG or RSTR	MONTHS	CURRENT ACTION			
					EFF DATE	% APPT	ANNUAL RATE	
							BASE	ONE-TIME

Agriculture & Life Sciences

Cockrum, Rebecca	Assistant Professor	Dairy Science	Reg	9	25-Dec-13	100	\$	77,250
Lee, Kiho	Assistant Professor	Animal and Poultry Sciences	Reg	9	25-Dec-13	100	\$	82,000
Persia, Michael	Assistant Professor	Animal and Poultry Sciences	Reg	9	25-Dec-13	100	\$	83,000
Sridhar, Venkataramana	Assistant Professor	Biological Systems Engineering	Reg	9	25-Dec-13	100	\$	91,000
Steele, Meredith	Assistant Professor	Crop & Soil Environmental Sciences	Reg	9	25-Dec-13	100	\$	75,000
Stewart, Ryan	Assistant Professor	Crop & Soil Environmental Sciences	Reg	9	25-Dec-13	100	\$	77,000

Engineering

Lee, Dongyoon	Assistant Professor	Computer Science	Reg	9	25-Dec-13	100	\$	90,000
Wang, Kevin Guanyuan	Assistant Professor	Aerospace and Ocean Engineering	Reg	9	25-Dec-13	100	\$	88,000

Liberal Arts and Human Sciences

Read, Dustin	Assistant Professor	Apparel, Housing and Resource Management	Reg	9	10-Aug-14	100	\$	115,000
Teaster, Pamela	Professor - Tenured	Center for Gerontology	Reg	9	10-Aug-14	100	\$	110,000

Science

Nesbitt, Sterling	Assistant Professor	Geosciences	Reg	9	25-Dec-13	100	\$	75,000
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TEACHING AND RESEARCH FACULTY

ADJUSTMENTS

NAME	TITLE	DEPARTMENT	REG or RSTR	MONTHS	CURRENT ACTION			
					EFF DATE	% APPT	ANNUAL RATE	
							BASE	ONE-TIME

Engineering

Westman, Erik	Interim Associate Dean for Academic Affairs	Engineering, Deans Office	Reg	12	10-Oct-13	100	\$	155,000
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Liberal Arts and Human Sciences

Gumbert, Heather	Assistant Professor	History	Reg	9	23-Sep-13	100	\$	70,204
Hirt, Joan	Interim Dean	College of Liberal Arts and Human Sciences Operations	Reg	12	25-Dec-13	100	\$	200,000
Pourchot, Georgeta	Instructor	Department of Political Science	Reg	12	25-Oct-13	100	\$	76,000

Natural Resources

Kelly, Marcella	Associate Professor	Fish and Wildlife Conservation	Reg	12	10-Oct-13	100	\$	100,014
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Vice President for Research

Eubank, Stephen	Associate Professor	Virginia Bioinformatics Institute	Reg	12	10-Jul-13	100	\$	200,000
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ADMINISTRATIVE AND PROFESSIONAL FACULTY

NEW APPOINTMENTS

NAME	TITLE	DEPARTMENT	REG or RSTR	MONTHS	CURRENT ACTION			
					EFF DATE	% APPT	ANNUAL RATE	
							BASE	ONE-TIME

President

Babcock, Bradley W	Director of Athletics	Athletics	Reg	12	17-Feb-14	100	\$	470,000	
					17-Feb-14	100			\$ 325,000
Hartsook, Austin	Director of Baseball Operations	Athletics	Reg	12	21-Oct-13	100	\$	30,000	
Searels, Stacy	Assistant Football Coach	Athletics	Reg	12	23-Jan-14	100	\$	265,000	

Vice President for National Capital Region

McKnight, Steven	Vice President for the National Capital Region - Tenured	National Capital Region Operations	Reg	12	1-Mar-14	100	\$	250,000	
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ADMINISTRATIVE AND PROFESSIONAL FACULTY

ADJUSTMENTS

NAME	TITLE	DEPARTMENT	REG or RSTR	MONTHS	CURRENT ACTION			
					EFF DATE	% APPT	ANNUAL RATE	
							BASE	ONE-TIME

Agriculture & Life Sciences

Alstat, Kathryn	Extension Agent	Greene County Cooperative Extension	Reg	12	1-Oct-13	100	\$	54,769
Garth, Jillian	Extension Agent	Orange County Cooperative Extension	Reg	12	1-Oct-13	100	\$	48,843
Hairston, Brian	Extension Agent	Henry County Cooperative Extension	Reg	12	1-Oct-13	100	\$	53,709
Hawkins, Amy	Extension Agent	Greenville County Cooperative Extension	Reg	12	1-Oct-13	100	\$	51,474
Nguyen, Lenah	Extension Agent	Fauquier County Cooperative Extension	Reg	12	1-Oct-13	100	\$	52,974

Business

Hunnings, Wanda	Associate Dean for Administration	Dean of Business	Reg	12	25-Nov-13	100	\$	128,260
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President

Adair, Charles	Head Women's Soccer Coach	Athletics	Reg	12	25-Dec-13	100		\$ 8,000
Ballein, John	Associate Athletic Director for Football Operations	Athletics	Reg	12	10-Jan-14	100		\$ 20,000
Beamer, Franklin	Head Football Coach	Athletics	Reg	12	10-Jan-14	100		\$ 25,000
Beamer, Shane	Associate Head Football Coach	Athletics	Reg	12	1-Jan-14	100	\$	238,500
					10-Jan-14	100		\$ 20,000
Brown, Cornell	Assistant Football Coach	Athletics	Reg	12	1-Jan-14	100	\$	238,500
					10-Jan-14	100		\$ 15,000
Capaldo, Stephen	Associate University Legal Counsel	Legal Counsel	Reg	12	25-Dec-13	100		\$ 3,000
Cusimano, John	Investments & Debt Management	University Treasurer	Reg	12	10-Dec-13	100		\$ 20,000
East, Timothy	Associate Athletic Director for External Affairs	Athletics	Reg	12	10-Jan-14	100		\$ 1,500
Ferguson, Jarrett	Director of Strength and Conditioning for Football	Athletics	Reg	12	10-Jan-14	100		\$ 6,635
Foster, Robert	Defensive Coordinator	Athletics	Reg	12	10-Jan-14	100		\$ 45,000

Gabbard, Thomas	Associate Athletic Director for Internal Affairs	Athletics	Reg	12	10-Jan-14	100	\$	1,500
Garnes, Bruce	Deputy Operations Director	Athletics	Reg	12	10-Jan-14	100	\$	4,124
Gentry, Roy	Associate Athletic Director for Athletic Performance	Athletics	Reg	12	10-Jan-14	100	\$	15,000
Gess, Mark	Associate University Legal Counsel	Legal Counsel	Reg	12	25-Dec-13	100	\$	84,600

continued

ADMINISTRATIVE AND PROFESSIONAL FACULTY***ADJUSTMENTS***

NAME	TITLE	DEPARTMENT	REG or RSTR	MONTHS	CURRENT ACTION			
					EFF DATE	% APPT	ANNUAL RATE	
							BASE	ONE-TIME
<u>President</u>								
Gilbert-Lowry, Reyna	Assistant Athletic Director for	Athletics	Reg	12	10-Jan-14	100	\$	750
Goforth, Michael	Associate Athletic Director for Sports Medicine	Athletics	Reg	12	10-Jan-14	100	\$	15,000
Gray, Torrian	Assistant Football Coach	Athletics	Reg	12	1-Jan-14	100	\$	243,800
					10-Jan-14	100	\$	15,000
Grimes, Jeffrey	Assistant Football Coach	Athletics	Reg	12	1-Jan-14	100	\$	280,900
					10-Jan-14	100	\$	15,000
Helms, Christopher	Associate Athletic Director for Olympic Sports	Athletics	Reg	12	10-Jan-14	100	\$	1,500
Hicks, Kevin	Director of Athletics Broadcast and Visual Communications	Athletics	Reg	12	25-Oct-13	100	\$	78,007
					10-Jan-14	100	\$	1,000
Huss, Stephen	Assistant Men's Tennis Coach	Athletics	Reg	12	25-Dec-13	100	\$	1,000
Jaudon, Jon	Associate Athletic Director for Administration	Athletics	Reg	12	10-Jan-14	100	\$	1,500
Karlin, Lester	Director of Equipment Services	Athletics	Reg	12	10-Jan-14	100	\$	15,000
Kopp, Andrew	Assistant Women's Soccer Coach	Athletics	Reg	12	25-Dec-13	100	\$	4,000
Loeffler, Scot	Offensive Coordinator	Athletics	Reg	12	1-Jan-14	100	\$	159,000
					10-Jan-14	100	\$	45,000
McClanahan, Marvin Hudson	Associate University Legal Counsel	Legal Counsel	Reg	12	25-Dec-13	100	\$	3,000
McCloskey, Sharon	Interim Director for Athletics	Athletics	Reg	12	10-Nov-13	100	\$	173,843
					10-Jan-14	100	\$	1,500
Moorehead, Aaron	Assistant Football Coach	Athletics	Reg	12	1-Jan-14	100	\$	159,000
					10-Jan-14	100	\$	15,000
Panella, Martha	Publications Director	Athletics	Reg	12	10-Jan-14	100	\$	500
Parker, Timothy	Associate Athletic Director for Governance and Compliance	Athletics	Reg	12	10-Jan-14	100	\$	1,250
Ridley, Erin Lycan	Assistant Women's Soccer Coach	Athletics	Reg	12	25-Dec-13	100	\$	4,000

Rudd, Lisa	Associate Athletic Director for Financial Affairs	Athletics	Reg	12	10-Jan-14	100	\$	1,500
Short, Keith	Coordinator of Strength and Conditioning for Football	Athletics	Reg	12	10-Jan-14	100	\$	4,045
Smith, Clarence	Assistant Athletic Director for Ticketing Services	Athletics	Reg	12	10-Jan-14	100	\$	1,000
Smith, David	Assistant Athletic Director for Athletics Communication	Athletics	Reg	12	10-Jan-14	100	\$	1,000
Stinespring, Bryan	Offensive Line Coach Recruiting Coordinator	Athletics	Reg	12	1-Jan-14	100	\$	318,000
					10-Jan-14	100	\$	20,000
Thompson, James	Head Men's Tennis Coach	Athletics	Reg	12	25-Dec-13	100	\$	2,000

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ADMINISTRATIVE AND PROFESSIONAL FACULTY***ADJUSTMENTS***

NAME	TITLE	DEPARTMENT	REG or RSTR	MONTHS	CURRENT ACTION			
					EFF DATE	% APPT	ANNUAL RATE	
							BASE	ONE-TIME

President

Underwood, Casey	Director of Outside Facilities	Athletics	Reg	12	10-Jan-14	100	\$	500
Weaver, James	Director of Athletics	Athletics	Reg	12	10-Jan-14	100	\$	58,691
Wells, Jeremy	Assistant Athletic Director for Marketing and Promotions	Athletics	Reg	12	10-Jan-14	100	\$	750
Wiles, Charles	Assistant Football Coach	Athletics	Reg	12	1-Jan-14	100	\$	291,500
					10-Jan-14	100	\$	15,000
Young, Perren	Head Spirit Coach	Athletics	Reg	12	10-Jan-14	100	\$	500

Vice President for Administrative Services

Helms, Mark	Interim Associate Vice President and Chief Facilities Officer	Facilities Services	Reg	12	1-Oct-13	100	\$	181,362
McCoy, Heidi	Chief of Staff and Interim Deputy Chief Facilities Officer	Vice President for Administration	Reg	12	1-Oct-13	100	\$	137,731

Vice President for Information Technology

Baab, Lujean	Senior Director of Networked Learning Design and Strategies	Technology-enhanced Learning and Online Strategies	Reg	12	10-Oct-13	100	\$	87,000
Broniak, Brian	Senior Director of Networked Knowledge Collaboration Services	Technology-enhanced Learning and Online Strategies	Reg	12	10-Oct-13	100	\$	92,000

Vice President for Research

Little, Heather	Team Leader, Pre Award	Office of Sponsored Programs	Reg	12	10-Nov-13	100	\$	50,000
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Vice President for Student Affairs

Brown, James	Interim Assistant Vice President and Dean of Students	Dean of Students Office	Reg	12	25-Nov-13	100	\$	135,000
Robinson, Carol	Director of Health Provisions Advisory	Career Services	Reg	12	10-Dec-13	100	\$	70,000

Smith, Benjamin	Assistant Director of Intramural Sports	Recreational Sports	Reg	12	25-Nov-13	100	\$	46,200
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Resolution of Appreciation for President Charles W. Steger

Whereas, Dr. Charles W. Steger has ably led Virginia Tech with boundless energy for more than 14 years as its 15th president, outlining and implementing a bold vision commensurate with standards of global excellence—with students always at the center—and vaulting the university to new levels of prominence among the nation's leading research universities; and

Whereas, Virginia Tech has seen increased demand among undergraduate and graduate students, resulting in 12 percent enrollment growth and the most highly qualified first-year students in university history with an average GPA of 3.92; and

Whereas, he changed the business model for research by creating large, centralized research institutes to foster sophisticated interdisciplinary collaborations, thereby dramatically increasing research expenditures by \$300 million and ranking Virginia Tech 40th in America; and

Whereas, Steger championed the arts and was the driving force behind the Center for the Arts; and

Whereas, under his adroit guidance, Virginia Tech realized a 50-year dream for Hokie fans - entry into the Atlantic Coast Conference in 2004; and

Whereas, he presciently entered the sphere of health and life science and partnered with Carilion Clinic to create the innovative Virginia Tech Carilion School of Medicine and Research Institute, forming the fifth medical school in Virginia; and

Whereas, this architect by training became an architect of growth, overseeing the largest expansion of the physical plant in university history by adding more than 2.5 million square feet of buildings; and

Whereas, he adeptly engaged partners in his vision of the future and through the largest fund raising campaign in university history raised more than \$1.1 billion to enhance the quality of the university and improve accessibility for students; and

Whereas, when Virginia Tech was visited by tragedy in 2007, President Steger's calm demeanor, steely resolve, and compassion coupled with the indomitable Hokie Spirit helped lead the university through dark days toward recovery; and

Whereas, these words can only begin to describe the profound impact of Charles Steger upon Virginia Tech, its student body, the university community, the alumni, and the Commonwealth of Virginia;

Now, therefore, be it resolved, on behalf of a grateful university community and alumni body, the Board of Visitors commends Charles W. Steger for his efforts to advance a university that enables its students, faculty, and staff to invent the future; and

Be it further resolved, that this board sends its sincerest appreciation for a lifetime of achievement and commitment to the ideals of the academy and American higher education; and

Further, the board extends its wishes for fruitful and happy life after the presidency of Virginia Tech.

Adopted on March 24, 2014

Board of Visitors Constituent Report

Erica Wood, Undergraduate Representative

Good morning Rector Quillen, President Steger, distinguished members of the board, administration, and guests. Thank you again for your time and attention. It is a privilege to speak to you about the undergraduate climate and our respective needs.

First, I'd like to formally thank you, Dr. Steger, for all that you have done for Virginia Tech. As Dr. Casteen said at last night's reception, your effective yet compassionate leadership, is truly a model for us to follow.

Since we last met, campus has, as always, been busy. In February, we celebrated Black History month with over 15 commemorative events. We've been celebrating Women's month throughout March. The Women's Center has been hosting an equally packed schedule of events that align with their mission of creating an environment that is supportive and celebrates the accomplishments and diversity of women. In addition, over 100 students traveled with Student Government to Richmond, for Hokie Day, a time to meet with Senators and Delegates and lobby for the needs of the university. Last week, 15 undergraduates met with Dr. Steger and other senior administrators for a luncheon at Prestons- we had discussions on topics ranging from the need for updated student space to the availability of veteran's services.

With Cranwell International center's leadership, our engineering living learning communities and student government volunteers participated in the first Global Café. Provided with free coffee at Deet's Place (the coffee shop on campus), international and domestic students were able to meet and build relationships through candid conversation. Global Café is happening again this week, in conjunction with International Week. Other programs planned focus on showcasing the international presence on campus, with hopes of introducing our students to different cultures and perspectives.

As I mentioned at our last meeting, revisions for the Curriculum for Liberal Education are going well. Undergraduates have been involved in several ways, one of the most effective being focus groups. The Office of the Provost hopes to offer pilot courses in the fall.

Lastly, I have been meeting with Nick, Joe, and Sue, as well as the presidents of the Student Government Association and the Graduate Student Assembly to discuss ways to catalyze better communication between each other's organizations and between our own representatives who serve on commissions and committees. We've begun to write a proposal to add the four governing bodies to the official Virginia Tech governance structure. We believe that with the current campus culture, this would facilitate communication and offer more validity to these important groups. It is also our belief that formally recognizing Student Government, the Graduate Student Assembly, and the Faculty and Staff Senates will allow our constituents to better recognize where they are represented.

Finally, I would like to congratulate Austin Larrowe on his selection as the 2014-2015 Undergraduate

Representative to the Board. I am very excited to work with him over the next three months and will further introduce him at the June meeting.

Thank you again for your time and dedication to Virginia Tech and the student experience.

**Graduate Student Representative
Constituent Report
March 23, 2014
Nick Warrington**

Good Afternoon President Steger, Rector Quillen, members of the board, university administration, and guest. Much has happened since the last time we met and I am very excited to share with you the work I have been doing.

First and foremost, on behalf of the graduate student community, I would like to thank President Steger for all he has done for graduate student education over his tenure as president. As many individuals attested last night at the celebration, he has always put the entire student body, along with the faculty and staff first in every decision he has made. President Steger, *thank you* for your years of service and dedication to this university. It has not come at an easy cost, and sacrifices have been made, but the Hokie Nation is stronger and more prevalent because of your leadership.

As Virginia Tech begins to transition, the graduate student community is excited and eager to meet with Dr. Sands to hear his vision for graduate education. I am sure that this item is on his agenda and hope that it is sooner rather than later.

As many of you know, affordable childcare for graduate students has been a topic of discussion for many years among graduate student representatives. I am pleased to share with the board that, with a lot of effort by Dean DePauw and a strong commitment by President Steger, we are currently in the process of hiring a professional who will be dedicated to researching and implementing strategies for effective childcare at Virginia Tech. In addition, I am pleased that I will be serving on the search committee for this position. I hope that I will be able to announce the coordinator at the June board meeting.

This is a very interesting time to be serving on the board of visitors as and advocate for graduate student students. Over the past 6 years the graduate student representatives have been advocating for better health care, academic advising, and child care. With child care moving forward, much of the initiatives have come to a satisfying end. This has required me to reflect on why I initially sought this position and was ultimately chosen by the board

to serve. In the fall, I came into this position to resolve major issues that graduate students had with the university. However, over the past 9 months I have had the opportunity to have conversations and meeting with nearly every individual on the senior leadership team of the university. Through those conversations I have come to realize that many of the issues that face the entire graduate student community have been resolves. Although I will not say that Virginia Tech is perfect or doing the best job it can at supporting its graduate student population, it's better than many of its peers.

Over the next three months, I will be meeting with the dean of each college to discuss how each college engages in conversation with graduate students about their experience. I have learned that in a decentralized structure like Virginia Tech, graduate students need an additional avenues to express their issues and concerns regarding their experience.

In an effort with the Graduate Student Assembly, I will be meeting with each dean to discuss what his/her college is doing to collect feedback on a regular basis. I will also work with each dean to provide consultation on the observations that I have made in my tenure as the graduate student representative to the board of visitors.

Through these meetings and discussions, I hope that we, as a collective team, will be able to achieve a common goal, which is to enhance the graduate student experience through teaching, research, and leadership.

During this semester, I have been working with Dr. Merola (Faculty Representative), Sue Teel (Staff Representative), Brent Ashley (Student Government), Greg Purdy (Graduate Student Assembly), and Erica Wood (Undergraduate Student Representative) to examine and propose a resolution that would bring Faculty Senate, Staff Senate, Student Government, and the Graduate Student Assembly into the Virginia Tech Governance Structure. This resolution will ask board of visitors to formally recognize the governing bodies that represent our students, faculty and staff as such. We hope to have a resolution before the board at the June meeting.

This year, we have an exceptional pool of graduate students who were all qualified in their own right. During the selection process, I was constantly asked the question was, "what's the most challenging part about serving as the graduate student representative?" My response was and is, in this role you have to be ok with the fact that at the end of the year, you may not be

able to go down a list of initiative and check them off as complete. Higher Education, Virginia Tech not excluded is a complex system that sometimes moves slower than we would like. As the graduate student representative, you have to intrinsically know and believe that through the conversations, meetings, and interactions you have with board members, administrators, and students are what will ultimately develop into change. If each graduate student representative before me had not started advocating for health care, academic advising, or childcare, we would not have the progress we have today. That is why this role is important to the Virginia Tech community.

The next three months will extremely busy as we search for the childcare coordinator and I work with each college to find effective avenues of communication for our graduate students. I truly believe that by creating advisory groups within each college can lead to greater graduate student involvement. Once again, it is my distinct pleasure to serve the board, Virginia Tech, and the graduate student community.

Staff Senate Constituency Report
Virginia Tech Board of Visitors
March 23-24, 2014
Presented by Sue Teel, Staff Senate President

Rector Quillen, members of the Board of Visitors, President Steger, administrators, and guests: Thank you for this opportunity to speak with you about the staff at Virginia Tech.

Since our last Board meeting we have had a multitude of speakers at our Staff Senate meetings. In December, Dr. Sherwood Wilson visited. This was his first time at a Staff Senate meeting. The staff had expressed an interest in hearing more about outsourcing. Our staff are very protective of one another and worry that jobs are being lost whenever a task that had been in-house is outsourced. Dr. Wilson assured us that one of the things Virginia Tech values the most is its employees and jobs are only outsourced when it makes sense from a business perspective. Staff left the meeting feeling assured that the University analyzes all perspectives prior to reaching a decision on outsourcing, balancing our obligation to run as efficiently as possible while being fair to the departments and employees that may be affected.

Jason Soileau, Assistant Vice President in the Office of University Planning, joined the staff at our January meeting. He provided updates to the master plan, similar to what he shared to the Board at the November meeting. The staff were pleased to be able to take the information Jason shared about the future changes proposed to our campus back to their constituency groups. Knowledge is power, and communication provides the knowledge.

In February, Dr. Ellen Plummer, Assistant Provost for Faculty Affairs, presented, "Shared Governance 101: Why Should I Care?" It wasn't until I became a Staff Senate officer that I started to fully understand this great thing that we call "shared governance." Part of my mission over the past two years as President of Staff Senate has been to communicate the opportunity to be involved and to educate staff who do become involved on their responsibilities. We have a somewhat unique opportunity here at Virginia Tech in that we do "shared governance" better than most. Dr. Plummer's attendance at Staff Senate and the subject of her presentation was advertised in the Virginia Tech Daily News feeds for about a month leading up to the meeting. Surprisingly, we had not only staff there but some Administrative and Professional Faculty, as well. The article had invited any staff interested in becoming involved to attend and find out what shared governance is all about. As a result of Dr. Plummer's presentation and the call for interest in filling vacant commission and committee seats for the next term there has been an overwhelming interest by staff to serve.

The buzz and excitement among staff and the potential to affect positive change in our work-life environments is exhilarating for me. Staff Senate has worked persistently to communicate and educate around the opportunities available. As this academic year starts to wind down, there is an upcoming event that I would like to share with you. The 20th annual James D. McComas Leadership Seminar will be held on Monday, May 5th, at The Inn. This year's theme is "Leaders and Legacies." The keynote speaker,

and who better to get to speak about “leaders and legacies,” will be our very own Dr. Charles Steger. Additional featured speakers include Dr. Mark McNamee, Dr. Nikki Giovanni, and Dr. Truman Capone. As Board members and obvious leaders in our campus community, if you have any interest and availability, I would like to invite you to attend. The committee has been working incredibly hard on this event and this year we hope to have our colleagues from not only other Virginia institutions but also regionally within the ACC.

Thank you for always being mindful of the opinions of the faculty, staff, and students. Our shared governance system works because the leadership here at Virginia Tech believes in the process. I truly appreciate the opportunity to share with you about what is happening with the staff and would be happy to answer any questions you might have at this time.

Respectfully,
Sue Teel
President, Staff Senate

**Faculty Senate Constituency Report
Virginia Tech Board of Visitors
March 23-24, 2014
Presented by Dr. Joe Merola, Faculty Senate President**

Rector Quillen, Vice-Rector Petrine, President Steger, Provost McNamee and all board members and honored guests.

This is the third time I have had the pleasure and privilege to speak on behalf of the Virginia Tech faculty and each time, the immensity of my task and the responsibility of communicating the view of the faculty weighs quite heavily on me. "Faculty" are *not* a monolithic group - we deliberately strive to hire a diverse faculty because of the great value that adds to the university - and they do not have all the same perceptions, needs and opinions. But let me try to do my best to talk about two areas for which there is agreement. I honestly haven't had time to polish this as much as I would like, so please forgive any potentially awkward statements.

First, thanks to the leadership of Rector Quillen and to Presidential Search Chair George Nolen, we have had a very successful presidential search leading to the selection of Dr. Tim Sands to be the 16th president of Virginia Tech. Now, only the future will tell the actual outcome of that selection, but I want to say that the faculty (with some caveats) were happy with the search. In looking at the committee makeup for presidential searches at other universities, Virginia Tech's was a much more representative group, involving faculty, staff and students as well as the Board. Many of the other committees from other universities consisted only of a few board members. So, kudos for making this committee a diverse one and for ensuring that constituencies from all around campus had a say in the process. Even had it arrived at the exact same outcome, I can tell you with a fair level of certainty that the campus would have been unhappy with the process and would have presented our new president with a greater challenge in his transition.

Second, I would like to comment on the great strides the university has made. Thank you President Steger. The "Invent the Future" motto has been taken to heart by the faculty and the faculty appreciate the immense strides we have made. The initiatives in the Washington Capital Region, the Virginia Tech Medical School and other activities around the world are recognized as great things for the University as a whole. But, and we all know there was going to be a "but", it would appear that faculty are asked to embrace the slogan as the "doers" but ignored as the "receivers". In a recent "report card" on university metrics, progress was made in all but one category - faculty salaries. The recent JLARC survey on faculty workloads shows that, across ALL universities in the commonwealth, faculty work 53-55 hours a week. My albeit unscientific polling of VT faculty would suggest that the number for Virginia Tech is probably in the 60+ range. So, a group who is working very hard to make this the great university that it is are the ones who are not really reaping the rewards

Along these lines, I do not wish to characterize faculty as being obsessed with their salaries, but being in the lowest rankings of our peer groups (15th percentile) is not something that can be dismissed lightly. A number of colleagues have asked me about policy of holding other jobs at fast food and other retail places so they can make ends meet. A real strategy must be put in place.

However, beyond money, the regard for the opinion and concerns of the faculty seems to have eroded. Faculty concerns regarding the establishment of some new academic programs have, in many cases, been shrugged off. While this is not the venue for specifics, there have been some very high profile concerns brought forward by faculty and, when all is said and done, those concerns were heard, but were ultimately not acted upon or acted upon in a way that meant the concerns were not remedied. “Invent the Future” must apply to our thinking about how to reward and give a greater say to faculty in the future of the university. When we see what can be done in many areas with resolve but hear a response to faculty issues “I just don’t see what we can do”, that is very disheartening. When told that “faculty aren’t leaving in droves” so that means we don’t need to do anything, that is very disheartening. When faculty raise some real concerns about how investments are not being made in the departments and when the faculty hiring process is missing some real opportunities and we are told “faculty like to whine a lot”, that is disheartening. Does all of the above represent a true picture or a misperception? I think it does present a true picture, but if it were a misperception, then I would suggest we have a real problem in communication at the very least.

In the spirit of “Ut Prosim” and “Invent the Future” faculty senate is being pro-active in discussing thoughts and ideas for possible plans of action to address faculty issues. Nick and Erica have already delineated the group of co-conspirators who have met. A task force has begun to discuss new models of the integration of faculty senate into a more direct line of university governance to ensure that the faculty voice is heard in a meaningful way.

My apologies for going a little over my time, but these issues are critically important for the university.