

Capital Outlay Plan for 2010-2016

JOINT FINANCE AND AUDIT COMMITTEE AND BUILDINGS AND GROUNDS COMMITTEE

May 5, 2009

At its March 2009 meeting, the Board of Visitors considered a recommendation that a list of potential projects for inclusion in the 2010-2016 Capital Outlay Plan be approved and that the University be authorized to develop and submit a final Plan to the state, in accordance with future guidance from the state and based on the projects in the approved list. The recommendation was approved, and the university has proceeded accordingly.

On April 15, 2009, the state issued instructions for the preparation and submission of the 2010-2016 Capital Outlay Plan and capital budget requests. The deadline for submission of the Six Year Plan is June 1, 2009, and it may be sent after the Board closes business at the June meeting. The state instructions for the 2010-2016 Capital Outlay Plan reflect recent changes in the state process for developing capital outlay programs and mark a significant change in the overall capital budget development process. The state has moved to establishing into law a defined list of capital projects covering a forward looking six-year period. The legislated list for the 2009 session and forward looking period is titled Chapter 46, and it includes all of the university's high priority projects from the 2008-2014 Capital Outlay Plan. Under the new program, the state will maintain a shorter list of projects for the forward looking six-year period and will update the list annually, rather than on the prior biennial basis. The annual updates are designed to ensure a managed flow of capital projects based on long-range planning strategies. To this end, the state has moved to a phased approval and appropriation method under which a project is reviewed and approved three times: pre-planning, detail planning, and full funding. Thus, a project may remain on the legislated list for two or three years until it reaches the full funding phase.

In accordance with the state's new program, the university has shifted the presentation of the six-year capital outlay plan from the traditional three biennia format to the format shown on Schedules A, B, and C. This project arrangement positions the University with options to respond to various funding abilities of the state in the future under the new capital program.

- Schedule A shows a list of projects for the 2010 plan update. The proposed list will update the current legislated list when the state replaces Chapter 46 in the 2010 budget session. These projects are in priority order, and the cost estimates reflect escalation to a construction midpoint of 2013.
- Schedule B shows a list of projects that may be used for the annual plan updates for the period 2011 through 2016. The more frequent updates require an established list of capital projects to flow forward as projects on Schedule A are approved for planning and full funding. These projects are in priority order, and the cost estimates reflect 2009 pricing. The cost estimates will be forecast more precisely to reflect the mid-point of construction as projects move to the A list in the future.
- Schedule C shows a list of projects with funding plans based entirely on nongeneral fund resources. Under the restructuring authority and management agreements, the Board of Visitors may authorize these projects as needed to achieve University

objectives. The university will bring forward a resolution for each item on a project-by-project basis. In accordance with the state instructions, these projects are not required for submission to the state.

Projects with nongeneral fund support, including portions of some gift campaigns, are generally financed with debt. Each potential debt financing undergoes a financial feasibility assessment to ensure resources are sufficient to cover the full debt service term without unnecessary financial risk to unit operations. The positioning of debt is further analyzed to ensure the university does not exceed the parameters of the university debt policy which sets a maximum limit of a seven percent ratio of total annual debt service to total operating expenses. While the policy sets a maximum ratio of seven percent, university management traditionally manages debt levels to ratios of approximately five percent as a conservative measure to ensure resource strength is focused on the strategic operations of the institution. The debt ratio for the year ending July 1, 2008 is three and one-eighth percent. For the forward looking six-year period, the projected debt ratio, including implementation of high priority debt issuance items on the capital list, is expected to remain below five percent.

The projects and their arrangement on Schedules A, B, and C are consistent with the programmatic needs established for the planning period and with the strategic plan of the University. In accordance with the state's plan to update the six-year list annually, the university may bring forward list updates for Board of Visitors' review and approval more frequently to stay in front of the state process. A brief description of each capital project for the entire 2010-2016 period is shown on Attachment A.

Beyond the submission of the Six-Year Capital Outlay Plan to the state on June 1, the expected capital process for the 2010 session includes at least six major phases:

- 1) over the summer of 2009, a state appointed Advisory Committee (staffed by several central agencies and offices) will review of the university's 2010-2016 plan with potential follow up by the university;
- 2) by October 1, 2009, the Advisory Committee will provide a set of recommendations to update the state's current Plan for the 2010-2016 period to the Governor and Chairmen of the Money Committees;
- 3) on December 18, 2009, the Governor is scheduled to submit the executive budget bill including planning funds and full funding for high priority items in the current plan (2009-2015);
- 4) in January 2010 (by the second day of the regular General Assembly session), the Governor is scheduled to submit a proposed update to the current six-year capital plan for the period covering 2010-2016;
- 5) during the 2010 General Assembly Session, the legislature may amend the proposed update as needed; and
- 6) effective July 1, 2010, the updated 2010-2016 Plan will be in place.

Recommendation:

That the proposed Capital Outlay Plan for the period 2010 through 2016 be approved.

June 1, 2009.

Schedule A

Project List for State Six-Year Plan Update in 2010

**JOINT FINANCE AND AUDIT COMMITTEE
AND BUILDINGS AND GROUNDS COMMITTEE**

May 5, 2009

<u>Priority</u>	<u>UNIVERSITY DIVISION</u>	<u>Planning Funds Authorized</u>	<u>Estimated Costs in Thousands</u>		
			<u>Projected to Construction Mid-Point ~ 2013</u>		
			<u>General Funds</u>	<u>Nongeneral Funds</u>	<u>Total</u>
1	Maintenance Reserve		\$ 24,000	\$ 11,000	\$ 35,000
2	Davidson Hall Improvements, Phase I	State	31,400		31,400
3	Engineering Signature Building	State	49,957	49,957	99,914 (a)
4	Chiller Plant, Phase I	State	12,060	8,040	20,100
5	Creative Technologies Laboratory		29,000		29,000
6	Classroom Building		46,486		46,486
7	Veterinary Medicine Instruction Addition		12,600	1,400	14,000
8	Davidson Hall Improvements, Phase II		27,191		27,191
9	Liberal Arts Building Renovation		13,211		13,211
10	Lane Hall Renovation/Addition		29,000		29,000
11	Library Collections Facility		6,656		6,656
12	Derring Hall Renovation, Phase I		65,153		65,153
13	Academic and Student Affairs Building	Board	10,000	32,250	42,250
14	Code Compliance and Access		2,811		2,811
TOTAL UNIVERSITY DIVISION			359,525	102,647	462,172
COOPERATIVE EXTENSION/AGRICULTURAL EXPERIMENT STATION DIVISION (229)					
1	Human and Agricultural Biosciences Building, Phases I and II	State	54,275		54,275
2	Kentland Facilities Improvements, Phase I	Board	15,500	5,000	20,500 (b)
TOTAL CE/AES PROJECTS			69,775	5,000	74,775
TOTAL PROJECT COSTS -- 2010 UPDATE			<u>\$ 429,300</u>	<u>\$ 107,647</u>	<u>\$ 536,947</u>

(a) The cost of this project is displayed at the current project estimate as determined by the University. Work is underway to attempt to reduce the total cost of the project. Thus, this project budget may be reduced in subsequent editions of this plan and in submissions to the Commonwealth.

(b) The project costs are preliminary and not yet based on planning work. The university intends to control costs to the maximum extent possible and may be able to infuse nongeneral fund support for a portion of the funding; however, this has not been finalized. Thus, this project budget may be adjusted in subsequent editions of this plan and in submissions to the Commonwealth.

Schedule B

Project List for State Six-Year Plan Updates for 2011-2016

**JOINT FINANCE AND AUDIT COMMITTEE
AND BUILDINGS AND GROUNDS COMMITTEE**

May 5, 2009

Priority	UNIVERSITY DIVISION	Planning Funds Authorized	Estimated Costs in Thousands		
			Costs Shown in 2009 Dollars		
			General Funds	Nongeneral Funds	Total
1	Price Hall Renovation		\$ 33,200	\$ -	\$ 33,200
2	Randolph Hall Replacement/Renovation		98,250		98,250
3	Myers-Lawson School of Construction, Phases II/III		22,500	22,500	45,000
4	Chiller Plant, Phase II		7,710	5,140	12,850
5	Sandy Hall Renovation		7,400		7,400
6	Classroom Renovations, Phase II		7,150		7,150
7	Translational Research & Medicine Laboratory		44,900	22,450	67,350
8	Computational Sciences Facility		38,500		38,500
9	Undergraduate Science Laboratory Building		58,000		58,000
10	Newman Library Renovation		134,150		134,150
11	Robeson Hall Renovation		39,200		39,200
12	Wood Science Department Building		35,318	6,233	41,550
13	CIMMID Laboratories Replacement		9,650	9,650	19,300
14	Patton Hall Renovation		33,150		33,150
15	Norris Hall Renovation		45,650		45,650
16	Holden Hall Renovation		26,250		26,250
17	Chiller Plant, Phase III		8,790	5,860	14,650
18	Hutcheson/Smyth Halls Renovation		66,250		66,250
19	Thomas Hall Replacement for Academic Programs		20,000		20,000
20	Femoyer Hall Replacement		21,020		21,020
21	Architecture Research Facility		2,288	2,288	4,575
22	Hahn Hall Exhaust Fan Repair		1,950		1,950
	TOTAL UNIVERSITY DIVISION		759,325	74,120	833,445
	COOPERATIVE EXTENSION/AGRICULTURAL EXPERIMENT STATION DIVISION (229)				
1	Kentland Facilities Improvements, Phase II		9,700		9,700
2	Plant Growth Center Laboratory Building		65,775		65,775
3	Eastern Shore Laboratory		1,720		1,720
	TOTAL CE/AES PROJECTS		77,195	-	77,195
	TOTAL OF 2011-2016 UPDATES		\$ 836,520	\$ 74,120	\$ 910,640

Schedule C

List of 100 Percent Nongeneral Fund Support Projects for 2010-2016

**JOINT FINANCE AND AUDIT COMMITTEE
AND BUILDINGS AND GROUNDS COMMITTEE**

May 5, 2009

Projects supported entirely with nongeneral funds have stand-alone funding plans and are advanced for Board of Visitors approval as funding is sufficient and other program dependencies permit.

Project	Planning Funds Authorized	Estimated Costs in Thousands		
		Costs Shown in 2009 Dollars		
		General Funds	Nongeneral Funds	Total
Cadet Residence Halls Renovation			\$ 104,800	\$ 104,800
Inn at Virginia Tech, Phase II			22,600	22,600
Northwest Student Union Facility			48,800	48,800
Oak Lane Commons Building			27,650	27,650
Southern Piedmont AREC Laboratory	Board		3,600	3,600
Technology Infrastructure			25,000	25,000
Virginia Bioinformatics Institute, Phase III	Board		29,600	29,600
VTTI Building III -- Capital Lease			13,900	13,900
TOTAL 100 PERCENT NONGENERAL FUND PROJECTS		\$ -	\$ 275,950	\$ 275,950
TOTAL 2010-2016 CAPITAL OUTLAY PLAN		\$ 1,265,820	\$ 457,717	\$ 1,723,537

Project Descriptions for 2010-2016 Capital Outlay Plan

**JOINT FINANCE AND AUDIT COMMITTEE
AND BUILDINGS AND GROUNDS COMMITTEE**

May 5, 2009

Schedule A: Project List for State Six-Year Plan Update in 2010

University Division

1. Maintenance Reserve

Since 1982, the Commonwealth has allocated General Fund support for preserving state-owned facilities. The Executive and Legislative Branches have mandated that maintenance reserve requests be the first priority in all capital outlay requests. This program includes individual projects to repair or replace major plant components with costs in the range of \$25,000 to \$1 million. These projects include roof repair or replacement, elevator repair and maintenance, repairs to air-handling systems, heating systems, storm sewers, and water and sewer systems. The funds in this program may not be used for normal operations and maintenance work costing less than \$25,000. In 1994, the University established a parallel Maintenance Reserve program for the auxiliary enterprise facilities funded with enterprise resources.

2. Davidson Hall Improvements, Phase 1 (Detail planning authorized by the state.)

This project request has been on the University's plan since 1993, formerly titled Renovation/Addition of Davidson Hall. The state authorized detailed planning funds in 2008 and full funding for the project is a high priority request for this budget cycle. The project originally envisioned renovation of the entire facility; however, the cost of addressing the entire building as a single project was too large. Thus, the University has divided the project into two components that are more reasonable from the state's cost and funding perspective. This project reflects the first component - to raze and fully replace the unrecoverable center and north sections of the existing Davidson Hall facility. The proposed project will restore the level of space needed for the program and will enable students to be optimally trained to move into today's industrial, governmental, and academic laboratories that specialize in nanotechnology, chemical biology, computational chemistry, environmental chemistry, drug discovery, and macromolecular chemistry to serve the commercial and governmental needs of the Commonwealth.

3. Engineering Signature Building (Detail planning authorized by the state.)

The state authorized pre-planning funds for the project in 2008, detailed planning funds for the project in 2009, and is included as a priority item for full funding for the 2010 budget cycle. The proposed 160,000 gross square foot facility will address severely deteriorated undergraduate academic space for the College of Engineering through a combination of classrooms, class laboratories, and research laboratories to house a number of

departments and programs in the college. This will be a state-of-the-art instruction facility focused on undergraduates with highly specialized laboratories that will support hands-on, problem solving oriented learning in the engineering disciplines. The project site is on the Prices Fork parking lot, slightly east of the new parking structure.

4. Chiller Plant, Phase I (Detail planning authorized by the state.)

The state authorized detailed planning funds in 2008 and full funding for the project is a high priority request for the 2010 budget cycle. This project has been on the University's plan since 2005 and is the first of a multi-phase strategy to optimize cooling infrastructure by shifting to a high efficiency central plant cooling strategy from individual building chillers. The project request is to construct a central chiller plant building on the southwest area of campus with capacity to hold approximately 12,000-tons of chilling service, install 2,000 tons of chiller output, and install distribution piping.

5. Creative Technologies Laboratory (Planning authorized under Performing Arts Center project.)

This project has been on the University's plan since 2007 and is included as a priority project to provide space for the School of Education's Science Technology Engineering and Mathematics PK-12 Outreach Initiative (VT-STEM). Virginia Tech's solution to establish the facilities necessary to support this initiative is to renovate an existing dining facility, Shultz Hall, which will be vacated when a replacement dining facility is completed. A renovated 55,400 gross square foot Shultz Hall will provide excellent teaching and learning facilities and will be reinforced by the adjacent new state-of-the-art Performance Hall and Visual Arts Gallery. The project is being designed as part of the Creative Arts Center project and full funding for the project is a high priority request for the 2010 budget cycle.

6. Classroom Building

This project has been on the University's plan since 2005 and is included as a high priority to increase the quantity of high quality general assignment classrooms to address the significant unmet demand for class registrations and to meet student expectations of state-of-the-art instruction space. This project includes construction of a target 64,250 gross square foot building with large-size classrooms on the north side of the academic core of campus.

7. Veterinary Medicine Instruction Addition

This project has been on the University's plan since 1993, formerly titled Veterinary Medicine Addition. The project requests authorization to construct an addition to the existing facility of about 32,300 gross square feet of instructional space to provide adequate classrooms, to relieve overcrowding of faculty space, and to accommodate planned hires.

8. Davidson Hall Improvements, Phase II

This project has been on the University's plan since 1993, formerly titled Renovation/Addition of Davidson Hall. This project reflects the second phase of improvements to Davidson Hall and will fully renovate and rehabilitate the interior and exterior of the historic front section of the building.

9. Liberal Arts Building Renovation

This project has been on the University's plan since 1993, formerly titled Renovation of Performing Arts Building. This facility will be vacated when the renovation of Henderson Hall is complete providing an optimal opportunity for renovation work. The requested project scope will fully renovate and rehabilitate the interior and exterior of the 19,250 gross square foot building. The building maintenance backlog is high, and these renovations will renew the building to serve as quality academic space in the core of the liberal arts zone of campus.

10. Lane Hall Renovation/Addition

Lane Hall was constructed in 1888, includes about 26,500 gross square feet, and has been operated and maintained as a key university landmark. The requested project will fully renovate the interior and exterior of the building. The project will also construct an approximately 15,800 gross square foot addition that will house several new general assignment classroom spaces and instructional spaces supporting the university's Corps of Cadets and the three Reserve Officer Training programs (ROTC).

11. Library Collections Facility

The project request is to construct a 5,000 gross square foot addition to the east side of Newman Library to house high-density, self-supporting, heavy-duty storage shelving and an automated, robotic retrieval system capable of handling up to one million volumes. The project will increase the ability to efficiently store and quickly retrieve materials without delay and without additional staff or floor space. This project will also free up library floor space to restore needed student study areas that have been lost to accommodate the growth of critical on-site volume storage.

12. Derring Hall Renovation, Phase I

This request is to renovate and modernize the equivalent of about 89,000 gross square feet of the 208,000 gross square feet of the existing building. Derring Hall was constructed in 1969, and the building has not had any major improvements or renovations since the original construction was completed.

13. Academic and Student Affairs Building (Detail planning authorized by the Board of Visitors)

The proposed project is an approximately 63,000 gross square foot building including dining services and instructional space located between ICTAS-1 and Randolph Hall. The project is under design through a Board of Visitors authorized planning project, and this request is provided to the state for funding to support the instructional component of the building.

14. Code Compliance and Access

The university's health, safety, and accessibility initiative for the campus is an ongoing effort, and the university includes a request for this program in each capital plan. This project request is for authorization and funding to continue progress on needed campus improvements including accessibility improvements, fire alarm systems, and updating

needs assessment and planning that are beyond the scope of the Maintenance Reserve program.

Cooperative Extension/Agricultural Experiment Station Division

1. Human & Agricultural Biosciences Building, Phases I & II (Detail planning authorized by the state.)

The state authorized detailed planning funds in 2008 and full funding for the project is a high priority request for the 2010 budget cycle to provide the Agricultural Experiment Station in the College of Agriculture and Life Sciences expanded modern research space. The total project envisions a 92,300 gross square foot facility with a combination of faculty offices, research offices and laboratories, and graduate student research space that will be used to house a number of research programs in the station. The title carries the designation of Phases I and II in accordance with the state's anticipated two-step process for supporting the project in the state's six-year capital outlay plan.

2. Kentland Facilities Improvements, Phase I

The university is developing a long-term sustainable land-use strategy for agricultural land uses which involves the land and facilities on campus as well as at the Kentland Farm. This strategy may result in a multi-phase relocation of agriculture research and teaching facilities. This project includes improving the facilities at the Kentland Farm to support the appropriate use of these facilities for instructional and research activities. As a part of this strategy the University may relocate the dairy operations (which include approximately 500 cows in the lactating, non-lactating, and bovine palpation herds) from their current campus location.

Schedule B: Project List for State Six-Year Plan Updates for 2011-2016

University Division

1. Price Hall Renovation

Price Hall was constructed in 1904 and is one of the oldest buildings on the campus. The 56,000 gross square foot building has received no major renovations, upgrades, or improvement projects since the original construction was completed. This project proposes to gut and renovate the entire building for offices, conference/seminar rooms, classrooms, and computer laboratories for departments of the School of Education.

2. Randolph Hall Replacement/Renovation

Randolph Hall was constructed in 1952, with an addition in 1959, and several non-capital, small-scale improvements have occurred over the years. The building includes about 166,000 gross square feet, and the proposed replacement/renovation will modernize the entire facility for engineering departments. The timing of this project is dependent of the completion of the Engineering Signature Building.

3. Myers – Lawson School of Construction, Phases II/III

This is a new project on the university's plan envisioned to add a total of 70,000 gross square feet to the current building, Bishop-Favrao Hall, which was completed in 2007. The current building includes 31,600 gross square feet, and these additions would adjust the total to about 100,000 gross square feet.

4. Chiller Plant, Phase II

This project is the second of three envisioned phases to establish a central cooling system to transition away from (decommission) existing individual building chillers. A centralized chilled water plant will provide more efficient operations, including energy savings, than stand-alone building specific chillers and cooling towers.

5. Sandy Hall Renovation

Sandy Hall was constructed in 1924 and has not had any major improvements or renovations since the original construction. The building includes about 12,400 gross square feet, and the proposed project will fully renovate the interior and exterior building for academic use.

6. Classroom Renovation, Phase II

This project supports a key university initiative, the Instructional Development Initiative, by systematically improving general assignment classrooms to support a technology-based educational program. This project plans improvements to 17 medium to large size general assignment classrooms. This project is dependent upon completion of the classroom building.

7. Translational Research & Medicine Laboratory

A key component of the University's strategic plan is to advance the University's research program through the development of expanded basic and applied research in the biological and life sciences. The Translational Research & Medicine Laboratory project envisions a 92,300 gross square foot scientific laboratory facility to support the expansion of the life sciences programs and to house a portion of the Center for Infectious Disease (CMMID).

8. Computational Sciences Facility

This project will provide permanent space for the computer science program to replace a temporary lease of 45,000 square feet of off-campus space in the corporate research center. The proposed building will provide a highly advanced computing infrastructure with considerable flexibility in its instructional spaces and research laboratories.

9. Undergraduate Science Laboratory Building

This project envisions a new facility of 77,000 gross square feet for undergraduate science laboratories, laboratory support services, and office space for faculty in the departments of Biology and Human Nutrition and Foods. The existing laboratory facilities used to deliver

instruction in Derring, Engel, and Wallace Halls are outdated and lack capacity to support the programs.

10. Newman Library Renovation

Newman Library was constructed in 1955, with an addition in 1980, and serves as the central materials storage facility for the entire university. This project request is for the reorganization and modernization of the library to provide a high quality library environment with up-to-date interactive learning formats that serve a 21st century university campus. This project is dependent on completion of the Library Collections Facility.

11. Robeson Hall Renovation

Robeson Hall was constructed in 1960 and there have been no major improvements or renovations since original construction was completed. The building includes about 66,000 gross square feet, and this project proposes a full renovation of the interior and exterior to support the requirements of modern science programs.

12. Wood Science Department Building

This project envisions a new facility of 92,300 gross square feet for science classrooms, laboratories, laboratory support services, and office space for faculty in the Wood Science and Forest Products department. The anticipated site is near the existing Brooks Forest Products Center.

13. CIMMID Laboratories Replacement

This project proposes to replace the antiquated life sciences research laboratories and support facilities currently located at the Center for Molecular Medicine and Infectious Disease (CMMID) complex. The replacement project is envisioned as an approximately 25,000 gross square foot facility located near the existing College of Veterinary Medicine complex.

14. Patton Hall Renovation

Patton Hall was constructed in 1926 and has not had any major renovations or improvements since it went into service. This project proposes to fully renovate the interior and exterior of the 53,000 gross square foot building to support engineering discipline academics for the Mechanical Engineering program in the 21st century.

15. Norris Hall Renovation

Norris Hall was constructed in two phases: the west wing in 1960 and the east wing in 1962. There have been no major building improvements or renovations since the original construction was completed. This project proposes to fully renovate the interior and exterior of the 73,000 gross square foot building to support Engineering Science and Mechanics and a portion of Civil and Environmental Engineering.

16. Holden Hall Renovation

Holden Hall was constructed in 1940 and has not had any major renovations or building improvements since it went into service. This project proposes to fully renovate the interior and exterior of the 42,000 gross square foot building to support the Mining and Minerals Engineering program and the Materials Science and Engineering program.

17. Chiller Plant, Phase III

This project is the final of three envisioned phases to establish a central cooling system to transition away from (decommission) existing individual building chillers. Upon its completion, the university will have a fully integrated cooling system.

18. Hutcheson/Smyth Halls Renovation

Hutcheson Hall was constructed in 1940 and Smyth Hall was constructed in 1939. This project proposes to fully renovate the interior and exterior of their combined 106,000 gross square feet to support academic programs in the College of Agriculture and Life Sciences.

19. Thomas Hall Replacement for Academic Programs

Thomas Hall was constructed in 1949 with an interior renovation in 1970. This project proposes to convert the 38,000 gross square foot building to academic use for departments in the College of Liberal Arts and Human Sciences from its current function as a residence hall. This project is dependent on the completion of the new residence hall which is underway.

20. Femoyer Hall Replacement

The building was constructed in 1949 as a dormitory, with no major building improvements or renovations since it was originally constructed, and it now houses academic programs. This project proposes to raze and replace the 36,000 gross square building with a new academic building.

21. Architecture Research Facility

The project is envisioned as a 16,000 gross square foot central research facility for architectural, engineering, and environmental concerns facing K-12 educational facilities in the Commonwealth of Virginia. The anticipated site is the Plantation Road research complex.

22. Hahn Hall Exhaust Fan Repair

Hahn Hall was constructed in 1988 and is a 71,000 gross square foot chemistry instructional research facility. This project proposes to replace the high velocity exhaust system of the science building because the system is deficient causing long-term, serious building use and maintenance problems.

Cooperative Extension/Agricultural Experiment Station Division

1. Kentland Facilities Improvements, Phase II

The original Kentland facility was constructed in 1818. This project proposes a complete interior and exterior renovation of the existing 15,500 gross square foot area to restore the facility and to correct deterioration and deficiencies. This project will complete the overall improvements to modernize the Kentland Farm for the agriculture program.

2. Plant Growth Center Laboratory Building

This project envisions a 92,300 gross square foot plant growth center to replace the outdated and inadequate existing greenhouse complex. The Plant Growth Center Laboratory Building, in addition to greenhouse space, is planned to include a conservatory, greenhouse technology development laboratory, growth chamber, tissue culture laboratory, pesticide storage and mixing area, environmental control chambers, classrooms, an exhibition area, offices, and general storage.

3. Eastern Shore Laboratory Renovation

This project envisions improvements to the existing 5,000 gross square foot laboratory including expansion to approximately 6,000 gross square feet to replace the outdated and inadequate existing AREC laboratory.

Schedule C: List of 100 Percent Nongeneral Fund Projects

University Division

1. Cadet Residence Halls Renovation (Brodie, Rasche, Monteith)

The Corp of Cadets reside in three residence halls; Rasche Hall and Brodie Hall house about 294 beds each and were constructed in 1894 and 1900, respectively; Monteith Hall houses about 232 beds and was constructed in 1949. Few improvements have been undertaken since the original construction of each of these residence halls. This project envisions interior and exterior renovations to refurbish the buildings and to address requirements of the Cadet program and its organizational needs.

2. Inn at Virginia Tech, Phase II

This project proposes to provide additional visitor accommodations to the existing 147 lodging rooms. The design of the Inn and Conference Center includes provisions for a future expansion of a wing of lodging rooms, and this project envisions adding approximately 55 guest rooms at such time as demand requires.

3. Northwest Student Union Facility

The proposed Northwest Student Union Facility will provide high demand campus-wide student service support functions, especially on the developing northwest area of campus. The envisioned project includes a new 82,400 gross square foot facility to meet student

expectations and alleviate overcrowding in the existing student union facilities in Squires and G. Burke Johnston.

4. Oak Lane Commons Building

This project proposes to create a common group facility providing shared dining, community development, and student services for the Oak Lane Community. The envisioned 43,000 gross square foot facility is envisioned to include food service, meeting/seminar, social, lounge, and fitness spaces.

5. Southern Piedmont AREC Laboratory (Detail planning authorized by the Board of Visitors.)

This project includes construction an 8,050 gross square foot Agriculture Research and Extension Center laboratory to replace the outdated and inadequate existing laboratory facilities. The proposed solution is a multipurpose laboratory building that will provide a physical setting for scientists to undertake innovative research that addresses complex agriculture issues. The project design is nearly complete, and a construction request is on hold pending the outcome of external funding and associated program space requirements.

6. Technology Infrastructure

This project will provide a totally new communications infrastructure environment to replace legacy network and telecommunication facilities. It will create an advanced high performance, flexible, cost effective collaboration and analysis infrastructure to support researchers, educators, students, and administrators. The project includes four key areas of improvement: access spaces, distribution, intelligent infrastructure, and pervasive access.

7. Virginia Bioinformatics Institute, Phase III (Detail planning authorized by the Board of Visitors.)

The program includes about 51,000 gross square feet of additional private and open office space for faculty, researchers, research associates, and support personnel for the Virginia Bioinformatics Institute (VBI). Additional conference, meeting, and assembly space of varying sizes, serving interdisciplinary science in the Virginia Bioinformatics Institute are also envisioned. The project design is nearly complete and a construction request is on hold pending the outcome of external funding and associated program space requirements.

8. VTTI Building III – Capital Lease

The existing buildings comprising the Virginia Tech Transportation Institute (VTTI) have no additional space available, and an adjoining facility would be needed to accommodate future growth. This project envisions additional private and open office space for faculty, researchers, and support personnel for future, anticipated expansion of VTTI. A vehicle garage and laboratory may also be integrated into the facility, along with additional parking for approximately 200 vehicles.