



Virginia Department of Planning and Budget
Project Request Justification

2006-2008 Biennium Date: July 22, 2005

A. General Information

1. Agency name: Virginia Tech 2. Agency code: 208
 3. Project title: Equip: Biology/Vivarium Facility 4. Agency priority: 24
 5. Contact Person: M. Dwight Shelton, Jr.
 6. Contact's telephone number: (540) 231-8775
 7. Contact's e-mail address: mdsjr@vt.edu

B. Proposed Project

1. Project Cost:

General Fund/General Fund supported debt	2,250,000
Nongeneral fund	
9 (c) revenue debt	
NGF supported 9 (d) revenue bonds	
Total request	2,250,000

2. Project cost changes:

NONE.

3. Description:

- This request is for restoration of equipment funds for a 2002 GOB project, a debt-financed project in the Capital Improvement Plan (CIP).
- The request covers funding for equipment and loose furnishings not included in the original project funding.
- This equipment funding is to outfit the facility with scientific research equipment and furnishings to support the research activities and provide environmental safety and protection for the staff and animals.
- The equipment is needed in fiscal year 2006-2007 to coordinate with the occupancy of the building and to ensure adequate procurement lead time for scientific equipment and compliance with purchasing policies.

4. Project scope change:

NONE.

5. a. Approved Master Site Plan:

Ye No
s

If not, explain:

b. 2004-10 Capital Outlay Plan:

Ye No
s

If not, explain:

6. Equipment for a previously funded project.

Location	Description	Qty.	List Price	Total
ABSL3 Holding	Animal Transfer Station	5	\$ 12,000	\$ 60,000
Holding	Animal Transfer Station	5	\$ 17,326	\$ 86,630
ABLS-3 Lab	Precision Balance	1	\$ 4,057	\$ 4,057
Procedure	Shallow Form Water Bath	1	\$ 496	\$ 496
Cagewash	Bottle Basket Dolly	2	\$ 800	\$ 1,600
Cagewash	Bottle Baskets (Small)	20	\$ 225	\$ 4,500
Cagewash	Bulk Truck	4	\$ 1,524	\$ 6,096
Procedure	Biological Safety Cabinet	1	\$ 10,310	\$ 10,310
ABLS3 Procedure	Biological Safety Cabinet	1	\$ 11,172	\$ 11,172
Vivarium	Mouse Cage (25% change out)	126	\$ 62	\$ 7,750
Vivarium	Storage Container with lid & dolly	21	\$ 90	\$ 1,895
Vivarium	Stainless Steel Utility Cart	20	\$ 675	\$ 13,500
Cagewash	Cage Wash Racks	4	\$ 2,344	\$ 9,376
Vivarium	Feed Containers	21	\$ 217	\$ 4,557
Vivarium	Freeze-Dry System (Lyophilizer)	1	\$ 8,650	\$ 8,650
Holding	File Station, fold down, wall mounted	40	\$ 360	\$ 14,400
Vivarium	Modular Aluminum Hand Truck	3	\$ 139	\$ 417
Vivarium	Intensive Cvare Unit	2	\$ 2,739	\$ 5,478
ABLS-3 Lab	Forced Air Incubator	2	\$ 2,889	\$ 5,777
ABLS-3 Lab	Incubator	2	\$ 6,200	\$ 12,400
Vivarium	Incubator	2	\$ 2,196	\$ 4,392
Vivarium	Incubator, Benchtop with accessories	1	\$ 5,230	\$ 5,230
Imaging	Imaging System	1	\$ 257,875	\$ 257,875
Procedure	Euthanesthesia Lid, fits 13" x 9" cage	11	\$ 203	\$ 2,228
Procedure	Narcotic Cabinet, Double Door	7	\$ 398	\$ 2,786
Vivarium	Hydraulic Pallet Truck	1	\$ 300	\$ 300
Vivarium	Portable Sanitizer	1	\$ 750	\$ 750
Vivarium	Platform Truck with crossbar	3	\$ 446	\$ 1,338
Feed Storage	Rack for Dunnage Storage	10	\$ 205	\$ 2,050

Animal Cage Rack, (112) Mice Cages, with HEPA filter/blower module & "224" Reverse "S" Edstrom Valves	20	\$	34,891	\$	697,820
Animal Cage Rack, (42) Mice or Rats Cages, HEPA filter/blower module	4	\$	12,174	\$	48,696
Stainless Steel Accessory Basket	6	\$	250	\$	1,500
Tilt Truck, Standard Duty	1	\$	742	\$	742
Ultrasonic Cleaner with basket	2	\$	980	\$	1,960
Water Purification System, local	1	\$	5,258	\$	5,258
Ice Flaker	1	\$	5,910	\$	5,910
Ice Flaker	1	\$	5,910	\$	5,910
Dual Access, pass-thru, class 2, type A2	1	\$	34,000	\$	34,000
Bottle Filler with proportioner	1	\$	15,900	\$	15,900
Bedding Manual Dump Station	1	\$	8,000	\$	8,000
Downdraft Workstation, HEPA Filter, Manual Hgt Adjust, Disposer, Hand Spray Hose	1	\$	11,658	\$	11,658
Large Sterilizer, 73x85x85 Chamber, double door, thru (2) doors	1	\$	290,000	\$	290,000
Large Sterilizer, 49x85x85 Chamber, (2) doors, thru (2) doors, Bio-Seal	1	\$	260,000	\$	260,000
Sterilizer, 26x26x39 Chamber, (2) Sliding doors, thru (1) wall, Bio-Seal	1	\$	100,000	\$	100,000
Vacuum Bedding System - Both Sides	1	\$	187,700	\$	187,700
Bookcase	1	\$	500	\$	500
Task Chair	2	\$	810	\$	1,620
Guest Chair	3	\$	453	\$	1,359
Task Stool	16	\$	513	\$	8,208
Desk Chair	1	\$	513	\$	513
Chair	8	\$	181	\$	1,448
Office Desk	2	\$	7,000	\$	14,000
File Cabinet	2	\$	547	\$	1,094

\$ 2,249,807
Total

7. Supplement to a previously funded project.

NONE.

C. Project Justification

1. a. Existing condition:

The 28,342 gross square foot Vivarium Building project was funded under the 2002 General Obligation Bond program and has construction of the facility has just commenced. The facility will support the research activities of over 234 staff engaged in disease research. The facility program includes 36 procedure and holding rooms for research, testing and experiments. Support spaces include decontamination, isolation, storage, office and staff hygiene areas. The building has been designed to university standards that anticipate a hundred year life span.

Higher Education Only

b. Facility Condition Index:

FCI _____

c. Space deficit:

Yes No

2. Programmatic information:

Biological sciences instruction and research is a high priority initiative needed to support the future development of the university and to reach the goal of becoming a top 30 research institution. Specifically, the university has identified biomedical sciences, bioinformatics, and microbiology as key focus points for this initiative.

These emerging fields require advanced state-of-the-art laboratories and equipment that are currently not available in the university's facility inventory. The Biology Building and Vivarium Facility will provide modern teaching and research space for interdisciplinary research, lab support spaces, faculty offices, and common use rooms for specialized multi-user equipment. Teaching and research areas include cell biology, molecular biology, molecular microbiology, plant molecular biology, and computational biology. This facility will be dedicated to teaching and training students at all levels to become part of the growing workforce in the 21st century – the century of Biology. Research conducted in this facility will benefit the Commonwealth and the nation with better understandings of cell functions, which ultimately will improve human health and longevity.

The vivarium component of this Biology/Vivarium facility will primarily serve animal researchers and veterinarians, providing needed space for expanding teaching and research initiatives. Quarantine rooms, animal holding rooms, and laboratory, surgery, cage wash, and feeding and bedding storage areas will be a part of the facility. Routine animal care, animal maintenance, preventive care, and highly detailed record keeping would also take place in this facility.

3. Alignment to strategic plan:

This project will supplement the Vivarium Building with funding for equipment. This project will support Virginia Tech's strategic plan in the areas of Research and Scholarship, Graduate Education, and Undergraduate Education. When completed, the Vivarium will provide modern facilities to support a multitude of activities in each of these areas and further the following university goals:

Research and Scholarship:

1. Increase the stature of Virginia Tech as a national research university in quality of research and scholarship.
2. Increase the stature of Virginia Tech as a national research university in quantity of research and scholarship.

Graduate Education:

1. Increase the quality of the graduate programs.

Undergraduate Education:

1. Maintain a current, relevant, and comprehensive undergraduate curriculum.
2. Strengthen the quality of undergraduate instruction.
3. Create learning experiences for undergraduate students that maximize the benefits of attending a large research university.
4. Expand the university's leadership role in the effective integration of instructional technology and pedagogy.

D. Options Considered

Delay to a future biennium in outfitting and furnishing the Institute for Critical Technology and Applied Science, Phase I building would result in a facility that would reach only a fraction of its potential as envisioned by the university and authorized by the state.

E. Project Schedule Changes:

NONE.