Virginia Department of Planning and Budget

Project Request Justification

2006-2008 **Biennium** **Date:** **October 27, 2006**

A. General Information

1.	**Agency Name:**	Virginia Tech	2.	**Agency Code:**	**208**
3.	**Project Title:**	Supplement: Cowgill Hall HVAC and Power	4.	**Agency Priority:**	**6**

5.	**Name of Person to Contact about this Form:**	M. Dwight Shelton, Jr.
6.	**Contact Person's Telephone Number:**	(540) 231-8775
7.	**Contact Person's E-mail Address:**	mdsjr@vt.edu

B. Proposed Project

1. Description (include project size, capacity, and purpose):

The project was authorized in the 2002 General Obligation Bond (GOB) Program with $7.5 million in GOB funding. After the passage of the 2002 GOB, the state established the Capital Implementation Plan (CIP) to schedule projects over a nine-year period in accordance with the legislative requirements under Chapters 839 and 888 of the 2002 Acts of Assembly. The CIP established the start date of this project at September 2004, about a two-year delay from the original schedule used to estimate the project costs.

Since the original estimate in 2001 and the initiation of planning in late 2004, the construction industry has experienced a significant worldwide escalation in the cost of construction and related materials that has directly impacted the project. Cost estimates in January 2006 reflected a revised total project cost of $10.1 million, a $2.6 million cost overrun for the project related to construction industry escalation. The University requested supplement funding in the 2006 session to cover the estimated overrun, and the request was approved.

The current total project budget is $10.1 million including $7.5 million of GOB funds and $2.6 million of General Fund. The project is in the final phase of design with the working drawings currently under review at the state's Bureau of Capital Outlay Management (BCOM). The review by BCOM should be complete in late November and the bids for the project received and opened January 2, 2007.

The most current cost estimates for the project show a $280,800 cost overrun because of additional escalation over the past year. Beyond the industry cost escalation, BCOM has stated that the University should address ADA compliance for the building's toilets, elevators, and stairways that previously had not been in the design. BCOM advised us to include these code driven elements in the project during their April 2006 review of the preliminary drawings. These elements add $944,200 to the project for a revised total project cost of $11,325,000.

The project scope involves infrastructure corrections, improvements, and code compliance and, thus, provides little opportunity for cost savings from building changes or program cuts. The University's efforts to reduce costs have identified some items that could be removed, including exterior window and exterior door replacements. While removing these elements from the scope would make the project affordable, their absence would have a significant negative impact on the project and program. Without these items, the building will not function properly.

The project is in the final phase of design review, with bids expected January 2007. Approval of this supplement request is needed in the 2007 session to ensure the originally approved program of the project is viable, to avoid scheduling and cost impacts to the project, and to ensure the project meets its scheduled occupancy date of May 2008. Deferring the supplement funding to the 2008 budget would cause significant scheduling delays and added cost to the project.

Thus, in accordance with the state's support to supplement previously authorized GOB project cost overruns associated with materials inflation and code compliance, this request is to fund the projected cost overrun and increase the budget for the Cowgill Hall HVAC and Power project (project code 16792) by $1,225,000 of General Fund support.

2. In approved Master Site Plan: **Yes** [X] **No** [ ]
If not, explain:

3. In current Strategic Plan: **Yes** [X] **No** [ ]
If not, explain:

C. Project Justification

1. Programmatic:

Since the building's completion in 1968, Cowgill Hall has served as the home of the College of Architecture and Urban Studies. The renovation of Cowgill Hall will address three critical building infrastructure concerns: air quality, inadequate electrical infrastructure, and code compliance.

The building infrastructure concerns were identified in the summer of 1986, when indoor air quality problems forced the closing and major cleaning of the facility's HVAC system. After the cleaning process was completed, Cowgill Hall has continued to suffer from recurrent indoor air quality problems. A contributing factor to these recurrent indoor air problems is the facility's outdated HVAC system, encompassing inadequate and uneven air distribution, no humidity control, and inadequate air filtration that results in dust-laden air. Along with the mechanical system shortcomings, envelope deficiencies (non-existent wall insulation and large single-glazed window systems) contribute to extreme interior temperature fluctuations and poor energy management. Several architecture faculty and staff have been forced to work in other buildings on campus after suffering recurring health problems. The College and University give highest priority to a resolution to these recurrent problems and a healthy working and learning environment.

The integration of computer applications and imaging technology into the practice and education of architecture professionals has led the College to make significant investments in computer technology. This curricula initiative has resulted in a significant increase in demand for power supply that the building can not adequately deliver. The existing wiring is a source of frequent concern by the Fire Marshall and does not provide the students adequate power to run the computers and other technology required by the curriculum.

The renovation activities to resolve the air quality and electrical deficiencies generate the need to address significant ADA compliance requirements relative to the building's rest rooms, elevators, and stairways. The project, if fully funded, will correct the HVAC, building envelope, and electrical systems in Cowgill Hall to resolve the air quality and the availability of electrical services throughout the building, and the significant resultant code issues.

2. Existing facilities:

The existing Cowgill Hall facility has major shortcomings in its capacity to provide a healthy and safe working environment. Following the HVAC cleaning process in 1986, Cowgill Hall has continued to suffer from recurrent indoor air quality problems. A contributing factor to these recurrent indoor air problems is the facility's outdated HVAC system, encompassing inadequate and uneven air distribution, no humidity control, and inadequate air filtration that results in dust-laden air. The thermally-deficient building envelope systems contribute to extreme interior temperature fluctuations and poor energy management.

The existing electrical wiring is not sufficient, has been a frequent source of concern by the Fire Marshall, and does not provide the students adequate power to run the required computers and other technology in the laboratories. The quality of the limited existing electrical power supply causes frequent computer malfunctions and disruptions in service.

Beyond the HVAC, building envelop, and electrical system deficiencies, the building has significant bathroom, elevator, and stairway improvements that were identified during the design review by BCOM that need to be addressed.

D. Options Considered **(include as an option delaying this project until future biennia. For supplements to existing projects, identify what scope changes would be necessary to complete the project within existing resources)**

Supplement Project:

The project is in the final phase of design with the working drawings currently under review at BCOM. The review by BCOM should be complete in late November and the bids for the project received and opened January 2, 2007.

The most current cost estimates for the project show a $280,800 cost overrun and $944,200 in costs to resolve newly identified code compliance issues, for a revised total project cost of $11,325,000. The project involves infrastructure corrections and improvements and thus provides little opportunity for cost savings from building changes or program cuts. The University's efforts to reduce costs have identified some items that could be removed, including exterior windows, exterior doors, and interior doors. While removing these elements from the scope would make the project affordable, their absence would have a

significant negative impact on the project and program. Without these items, the building will not function properly.

Approval of this request is needed in the 2007 session to ensure the originally approved program of the project is viable, to avoid scheduling and cost impacts to the project, and to ensure the project meets its scheduled occupancy date of May 2008. Deferring the supplement funding to the 2008 budget would cause significant scheduling delays and added cost to the project.