

December 22, 2015

Mr. Aaron Allred, Legislative Manager  
West Virginia Legislature  
Joint Committee on Government and Finance  
Building 1, Room E-132  
1900 Kanawha Blvd., E.  
Charleston, West Virginia 25305

*Re: West Virginia University notification pursuant to West Virginia Code §18B-19-6(d)*

Dear Joint Committee on Government and Finance,

Pursuant to West Virginia Code § 18B-19-6(d) and appended for your review, please find a description of the capital project referred to as the “West Virginia University (WVU) Health Sciences Center (HSC) Infrastructure Master Plan”, also known as the WVU HSC Deferred Maintenance Master plan.

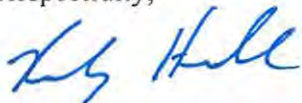
Pursuant to West Virginia Code Section 18B-19-6(d)), this letter and the attached are being provided at least thirty (30) days prior to WVU beginning construction or renovation.

The attached project description was presented to and approved by WVU’s Board of Governor’s at their June 5, 2015 meeting.

The above-referenced project is expected to cost up to \$50 million. However, the project is being completed in three phases. In this communication, WVU is giving notice regarding Phase I of the WVU HSC Infrastructure Master Plan which WVU estimates will cost up to \$20 million, including financing costs.

In the event that you have any questions or need additional information, please feel free to contact me at 304.293.7202.

Respectfully,



Randy Hudak  
Senior Associate Vice President for Facilities and Services

**WEST VIRGINIA UNIVERSITY BOARD OF GOVERNORS**  
**June 5, 2015**

**ITEM:** Health Sciences Center Infrastructure Master Plan

**INSTITUTION:** West Virginia University

**COMMITTEE:** Full Board – Consent Agenda

**RECOMMENDATION:** Resolved: That the West Virginia University Board of Governors approves the Health Sciences Center Infrastructure Master Plan and authorizes Phase I to begin with a budget of \$18 million. Furthermore, the Board of Governors incorporates the HSC Infrastructure Master Plan as a component of the WVU Master Plan.

**STAFF MEMBER:** Narvel G. Weese, Jr.  
Vice President for Administration and Finance

**BACKGROUND:** The Health Sciences Center (HSC) facility was opened in 1957 and virtually all of the original building infrastructure still serves the facility. The performance of the physical plant infrastructure has deteriorated over time due to age and consequently there is a need for upgraded modern building infrastructure.

West Virginia University Health Sciences Center commissioned McHenry and Associates to conduct a more focused assessment of architectural, structural, mechanical, electrical, and plumbing building infrastructure systems. The evaluation identified the most critical projects and based on this assessment a comprehensive Infrastructure Ten Year Master Plan was developed totaling \$50 million.

To minimize the impact the students and research while working in an occupied building the Ten Year Master Plan has been broken down into three phases. This plan is anticipated to be funded by new financing. The long-term deferred maintenance strategy for the Health Sciences Center also includes an annual deferred maintenance fund to accommodate routine deferred projects or unplanned failures. Current funding of \$500,000 per year has been identified and efforts are ongoing to develop this funding stream with annual increases from current operations.

**Project Scope:**

**Phase I**

Primarily HVAC and electrical replacements on the 5<sup>th</sup> Floor due to their critical nature to support the needs of the occupants and active research. The budget for this work has been estimated to be \$16 million. In addition to this work, the Phase I budget includes approximately \$2 million in funding for design of the future phases of the plan.

**Phase II**

HVAC and electrical equipment replacements throughout the building and roof replacements. The budget for this Phase has been estimated to be \$19.7M including design costs funded as part of the Phase I budget.

**Phase III**

Plumbing, remaining roof replacements, and remaining HVAC replacements. The budget for this Phase has been estimated to be \$14.5M including design costs funded as part of the Phase I budget.

**Phase I Project Funding:**

Budget \$18,000,000

Funding Source: External financing will fund the project. Ongoing debt service payments will be made from HSC funds identified for this purpose.

**Schedule:**

Phase I: 2015 – 2018

Phase II: 2019 – 2021

Phase III: 2022 - 2025

**ATTACHMENTS:**

Project list – Phases I-III

# Robert C. Byrd Health Sciences Center Deferred Maintenance Master Plan

## Phase 1

Health Sciences North, 5th Floor Mechanical Room, all equipment serves floors 1 through 4	\$15,764,000
Replace air handlers, exhausts, ductwork, piping, and electrical systems that support interior ventilation requirements. 10 air handlers, ranging in age from 35 to 61 years, will be replaced.	
Replace heat exchangers/reheat coils in ductwork to improve ability to control temperatures in occupied spaces	
Replace the glycol heating loop equipment for the air handlers	
Replace 7 exhaust fans that serve the building	
Replace motor control centers to support the new air handling equipment.	
Install heat recovery on the new air handlers and exhaust fans to improve energy efficiency	
Abate asbestos containing materials within the 5th floor mechanical room	
Chiller Plant	
Replace failed transformer serving the Chiller Plant power center. There are two transformers, but only one is operational. Without the second transformer, a failure will shut down the Chiller Plant.	\$50,000
Phase 1 Total	<u>\$15,814,000</u>

## Robert C. Byrd Health Sciences Center Deferred Maintenance Master Plan

### Phase 2

Entire Health Sciences Campus		\$2,311,000
	Replace 23KV electrical substation feeders and the electrical tie feeders between Health Sciences North and Health Sciences South buildings. Feeders are original to the campus.	
Chiller Plant		\$3,025,000
	Replace chillers #2 and #3 providing chilled water to the HSC campus and Ruby Hospital.	
Health Sciences North		\$6,070,000
	Replace roofs over the Gross Anatomy Laboratory, Classroom Labs, and mechanical spaces.	
	Replace waste piping due to multiple leaks and failures compromising interior spaces throughout all of HSC North.	
Health Sciences South		\$8,266,000
	Replace electrical power centers after the 23KV and tie feeders are replaced. The power centers provide electrical power to all of Health Sciences South.	
	Replace motor control center to improve service reliability after the 23KV and tie feeders are replaced. The equipment is original to the building and repair parts are increasingly unavailable.	
	Replace existing 600KVA emergency generator with a 1200KVA generator to meet increased demand in the building.	
	Replace roofs over Classroom Labs, Clinical Staff Offices, and Mechanical Room	
	<b>Phase 2 Total</b>	<b>\$19,672,000</b>

## Robert C. Byrd Health Sciences Center Deferred Maintenance Master Plan

### Phase 3

<p>Entire Health Sciences Campus</p> <p>Install medium voltage regulation between the 23KV and 4160V feeders. Then install voltage regulation between the 4160V and 480V feeders. This will improve voltage regulation on the HSC Campus.</p> <p>Health Sciences North and South</p> <p>Replace the roofs on both buildings that were not replaced in Phases 1 and 2. They are over Classroom, Classroom Labs, Office Spaces, and clinical spaces.</p> <p>Health Sciences North</p> <p>Replace 3 motor control centers in the basement. They support the mechanical equipment that serves the basement and ground floors.</p> <p>Replace 3 steam condensate systems (tanks, pumps, and lines as needed) that serve the building heating system.</p> <p>Upgrade the pneumatic controls on the HVAC equipment to digital. This will enhance the level of control and improve reliability of the heating and cooling equipment in the building.</p> <p>Replace air handler in room 2117 serving the Pathology Amphitheater. Unit is 61 years old.</p> <p>Replace air handler in room 2167 serving the Pathology Amphitheater. Unit is over 50 years old.</p> <p>Replace the air handler in room G191 serving the Okey Patteson Auditorium.</p> <p>Replace the air handler on the 3rd floor roof that serves Physiology Research Labs and Offices. Unit is 38 years old.</p> <p>Health Sciences South</p> <p>Replace 2 transformers at the Health Sciences South substation. They are original equipment installed in 1958. This will improve electrical reliability.</p> <p>Replace emergency electrical circuits and panels for the Life Safety branch in the entire building.</p> <p>Replace waste piping due to multiple leaks and failures compromising interior spaces throughout all of HSC South.</p> <p>Replace the air handler serving the ground floor labs around the animal quarters and the morgue. The unit is undersized for its connected load, over 25 years old, and in poor condition.</p>	<p>\$500,000</p> <p>\$5,146,000</p> <p>\$1,981,000</p> <p>\$6,887,000</p>
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Phase 3 Total \$14,514,000

Total \$50,000,000