

THE PENNSYLVANIA STATE UNIVERSITY  
DEPARTMENT OF ARCHITECTURAL ENGINEERING  
SENIOR THESIS

# UPMC Passavant Pavilion

Pittsburgh, Pa

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## Thesis Breadth Proposal

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UPMC Passavant  
Tower Addition

Burt Hill, Architects

## **Appendix A – Breadth Studies**

While completing the in depth construction management analyses for the UPMC Passavant Pavilion and Addition I plan on also investigating other areas of the Architectural Engineering discipline. These breadth studies will be part of a larger construction management investigation and they are briefly explained below.

### **Structural Breadth**

My proposed structural breadth is a portion of a larger construction management investigation in which I propose to use precast concrete sandwich panels in lieu of hand laid brick veneer. When determining if this alternate system is a viable option it is important to investigate the structural details that may need to be changed. The brick relief angles that are currently designed will need to be evaluated to determine if they can be utilized for the precast wall panels. If they cannot be utilized a new detail will need to be produced along with any additional connection details that are needed for the system.

### **Building Enclosure Breadth**

From the same detailed construction management analysis outlined in the structural breadth I also plan on completing a building enclosure breadth. Within this analysis I will explore the thermal efficiencies of each system and determine what implications, if any, they will have on the overall integrity of the building enclosure. It would also be necessary to examine the interfaces between the two proposed systems and the other components of the building enclosure to determine any advantages or disadvantages for using each system. While studying the interfaces between the components of the building enclosure system I will examine the moisture and thermal control requirements and ensure that the system complies with relevant standards.