

Executive Summary

This paper will discuss various pieces of information regarding the construction of the new 63,318 square foot Health and Counseling Services Building at The Pennsylvania State University. Key findings of this paper include a milestone evaluation of the project schedule, descriptions of the major elements of the building systems, comparisons of actual and computerized project estimates, site plan evaluation, a look at the construction methods used in the State College area, information about Penn State's expectations for this project, analysis of the project delivery system and the staffing plan used by the construction manager.

Construction began in May 2006 and will be substantially completed in May 2008. Commissioning and occupant move-in will be completed by the end of July so that the building will be ready for use at the beginning of fall semester 2008.

The structural system is a typical moment connection steel frame with a micro pile and grade beam foundation. A glass curtain wall is on the South face that wraps around partially on the East and West sides of the building. The building is five levels with the first level only accessible from the South face due to the sloping grade from North to South.

The mechanical system includes two rooftop air handling units and one indoor air handling unit that will feed only the server room on the first floor. The system uses multiple fan coil units and an array of variable and constant volume boxes to supply enough air to keep the occupants at a comfortable temperature.

Actual construction costs are compared against two forms of generalized estimating software. D4 cost estimating software and R.S. Means Costworks are used to

evaluate the projects costs. These cost analysis show distinct differences between actual and estimated construction costs due to locations, construction methods, and construction materials among other items.

The Whiting- Turner Contracting Company is the lead on this project and holds all of the contracts with the prime contractors. All contracts between the CM and prime contractors are lump sum, while the contract held between Whiting-Turner and the university is CM at risk. The contract between Penn State and Hillier Architects is characterized as a PSU form of agreement 1-P, which is essentially a lump sum contract. Hillier is contracted directly with there consultants.

The project is LEED rated in accordance with the recently adopted Penn State policy to construct green buildings on the University Park campus. At this time, the LEED rating being applied for is a certification.

The owner has multiple concerns about the project. The schedule of work during the winters in state college and the timing of the steel order are examples of potential problems. Proper decisions and management of the project will do well in alleviating these potential pitfalls.