

## **Executive Summary**

The following proposal examines the four critical analyses planned for research on the PSHMC Cancer Institute and the construction industry as a whole. These ideas were initially presented in Technical Assignment 3, and reworked to incorporate ideas generated through the feedback phase. Research will begin over the winter break and will continue through to April, with results to be presented at the final Thesis presentations.

The first analysis looks at the industry issue of subcontractor bid markups, and how they have been personalized for individual construction managers and general contractors. A survey-based analysis will lead to the formation of a matrix which will aid these companies in reevaluating their subcontractor management methods and how to better their relationships and bid competition.

The first technical analysis looks at the Emergency Delivery renovation and the impact of the redesign on the ICRA plan. Research will examine how the sequencing of the job was reworked to facilitate the ICRA plan, and will involve a constructability review to identify opportunities for cost or schedule improvements.

Next, an analysis on the radiotherapy equipment and enclosures will be performed, examining the possibility of modular installation. The recently completed PSHMC Oncology Treatment Building had planned for prefabricated elements with its equipment. However, the plan was changed due to subcontractor shortcomings. This analysis will be based on value engineering and schedule reduction aspects of construction.

The third analysis is a short study of the early phasing plan and how it could have been better managed to facilitate the helipad construction and ED renovation. A number of unforeseen problems arose that impacted the overall schedule of the project, and these will be examined further through schedule and constructability. Lastly, a weighted matrix is provided to show the distribution of effort among these four analyses over the research phase.