

## 1.0 Executive Summary

The thesis proposal serves as a guide for research to be conducted throughout the Spring 2006 semester. This research then culminates into a redesign of the mechanical system for the Hearst Tower located in New York City. In addition to the mechanical redesign, other systems affected by the new design are also addressed through two breadth area studies.

The attached proposal not only explains the principle redesign topic, but addresses justification, methodology, coordination, and integration issues. Before deciding upon a final redesigned system, several other alternative systems were researched. Ultimately the proposal will outline the use of a steam driven absorption cooling process with a dedicated outdoor air system paralleled by variable air volume distribution.

Since the proposed redesign directly affects the electrical and structural system of the tower, these two areas will serve as the topics of the breadth analysis. A life cycle and annual operating cost analysis will also be conducted when redesign is completed. All research conducted will result in a presentation to The Pennsylvania State University Architectural Engineering Faculty in April 2006.

