Philip Mackey L/E Dr. Mistrick

Depth and Breadth Design Proposal

Breadth Proposal

The following two breadth proposals will be related to the emergency electrical system redesign explained above in the depth portion of this document.

Mechanical:

With the anticipated changes in transformer size and location with respects to the first electrical system alternative, I will be investigating the impact this will have on the mechanical loads associated with the heat losses of a transformer. Since most of the electrical rooms will be losing at least one transformer, their cooling requirements will decrease. Similarly, the mechanical penthouse will gain a significant mechanical load with the addition of a single transformer replacing the numerous smaller transformers that were dispersed throughout the addition.

Construction Management:

Although I am performing a basic cost analysis between the current system components and the second alternative, I will also be performing a detailed cost analysis of the difference between the current emergency electrical system components to be removed and the proposed alternative 1 changes. This cost analysis will consist of system component costs, installation costs, lead-time considerations, and changes in installation time.