Breadth Executive Summary

A thorough knowledge of all of the building systems must be demonstrated through this proposed building redesign. While the main focus shall be upon the building mechanical systems, several other systems will be analyzed to provide breadth to the redesign.

The proposed breadth alternative is incorporated within Alternative 7, as mentioned in the Executive Summary. This alternative includes an acoustical and lighting analysis of key spaces within the building. The acoustical analysis shall be performed through hand calculations as well as the application of the free ESP-r software available through the U.S. Department of Energy. To complete the lighting analysis, the lighting power density shall be analyzed and the fixtures will possibly be redesigned to operate with less energy use. The redesign of the lighting system shall be accompanied by consultations with available lighting professionals.

However, Alternative 7 is not the only section of the proposed building renovation that will provide experience in other building systems. The renewable energy alternative provides experience with power and electrical distribution systems. Also contributing to the breadth of experiences is the LEED EB evaluation. To achieve a LEED certification, all of the building systems must be analyzed, and experience will range from construction management to electrical and lighting, to architecture and the use of materials. Finally, the first alternative requires a close inspection of the building site and its programming, which will provide additional experience with architecture and possibly construction management.

As these proposed renovations reach completion, a wide variety of skills and knowledge must be used. A breadth of knowledge will be demonstrated within the architecture, acoustical, electrical, and construction management areas of expertise. This is an unusual diversity of applicable skills that is not often encountered within the design of a single consultant. The completion of this redesign project will provide an integrated look at the existing and proposed building systems through the eyes of several disciplines, and hopefully provide the best solution for the current problems.