

Loyola/Notre Dame Library, Baltimore, MD

Final Thesis Report



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Construction Management

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Executive Summary

This final thesis report is a reflection of the year-long study of the Loyola/Notre Dame Library, located in Baltimore, MD. A majority of the study was strongly focused on the construction management techniques for the existing project.

In Spring 2008, new methods of design and construction were proposed for the library. The following four analyses were conducted:

A. Thesis Research:

“Sustainability: Energy Efficiency Efforts in Universities across the United States”

The focal point of all of the exceeding analyses. Each analysis has incorporated new energy saving techniques in their re-design proposals.

B. Thesis Depth Study:

“Modular Curtain Wall Construction”

Prefabricated construction is a popular new method of construction that can save time and money. Cost and schedule were greatly reduced by using curtain wall modules in place of a traditional “stick-built” system.

C. Thesis Mechanical Breadth Study:

“Solar Shading Analysis”

Existing Solar shades were removed and shading was re-designed. Longer three foot shades were added and relocated to maximize shade and daylight, while reducing necessary cooling energy for the summer months.

D. Thesis Lighting Breadth Study:

“Daylight Study”

The main idea of this analysis was to show daylight distribution for the newly designed shades. Lightshelves were extended by one foot to help re-direct more of the sun’s indirect light as well. Two dimensional and three dimensional renderings of the three floors of gallery space show the calculations that were performed in AGI software.