Executive Summary

Through the completion of this thesis report several areas of the Franklin & Marshall College Row project in Lancaster, PA were analyzed. The report is broken down into four main parts.

In the first part of the report is the project overview. Here the project is introduced and includes general information such as client information, project and staffing organization, delivery method, existing conditions, site plans, schedules, and estimates.

Following is the first analysis looking into Building Information Modeling (BIM), with a focus on the owner. This analysis looks into what a BIM is capable of and how an owner can utilize the tool. Included are an industry questionnaire, a look at Penn State and its approach to BIM, looking at BIM from an owner perspective and how it can compliment an operations and maintenance program, and finally a software review that focuses on Autodesk's FMDesktop.

The next analysis compares the flooring systems, composite metal deck and precast concrete plank, both used on College Row. Both methods will be analyzed with a look at design details, cost, and schedule issues, including a redesign of the reinforcement for the slab on deck.

In the final analysis, construction during cold, winter weather conditions is studied. Here the focus is on concrete activities and how they are affected, with a look into scheduling and cost concerns and the amount of heat loss.

An overall theme in this thesis was to look at areas that are specific to a higher education project. Operations and maintenance after a project completion, and budget and schedule issues are all important concerns.