



Executive Summary & Breadth Topics

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Hanover, Maryland

December 18, 2007

Table of Contents

4.1 Executive Summary.....	1
Appendix A. – Breadth Topics.....	2

4.1 Executive Summary

The following report introduces the Aloft and Element Project at Arundel Mills and discusses some basic information specific to the project. The report goes on to identify several proposed topics that will be analyzed during the next semester of study at Penn State. The topics that will potentially be analyzed in the future are listed below.

- The Effects of BIM on the Quality of Construction Documents
- PTAC Units in Lieu of a Forced Air System
- Prefabrication of Guest Bathrooms
- Short Interval Production Schedule (SIPS)

Each topic includes an outline of a statement to identify the problem, the goal of examining the analysis topic, the steps that will be taken to achieve the goal stated, and the expected outcome of the analysis. The report then continues on to illustrate how time will be distributed throughout the next semester. The appendix at the end of the report then lists the topics outside of the construction field that will be analyzed.

Appendix A. – Breadth Topics

Below are the proposed ideas that I have for breadth topics which are outside of the construction management field.

Mechanical Breadth

I will first restore knowledge about designing HVAC systems. I will then analyze the heating and cooling load needed for a typical guestroom. Using this information, I will size a package terminal air conditioning unit (PTAC) unit for a typical guestroom in lieu of the specified forced air system. I will then analyze the sizing/ number of air handling units utilized to heat and cool the Aloft and Element hotel buildings based on the load that will be alleviated by implementing PTAC units.

Structural Breadth

As a continuation of the mechanical breadth above, I will examine the structural system of the roof of the hotel buildings. By reducing the size/number of three AHU's per hotel, I will alleviate some of the load on the roof of the buildings. I will then suggest a redesign for the structural system of the roof.