

Donna Kent
Structural Option
Building: Vickroy Hall
Location: Duquesne University
Pittsburgh, PA 15282
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Title of Report: Technical Report 2
Faculty Consultant: Dr. Boothby



Executive Summary

The purpose of this report is to analyze, design, and evaluate four alternative floor systems in the building. The report will give preliminary sizes of members, depths, and other pertinent information about each system. Figures from Handbooks are present as well as hand calculations and tables.

The four alternative floor systems that I chose were Hollow Core Planking on Steel Supports, One-Way Concrete Joist System, Two-Way Flat Plate System, and finally Hollow Core Planking on Concrete Beams and Masonry Bearing Walls.

Through calculations and tables, I have decided that all systems, including the original system require further investigation. The only system that I am remotely unsure about is the Hollow Core on Masonry Bearing Walls. It is difficult to tell if placing bearing walls in place of the columns will result in a change in the architecture or physical spaces in the building. Therefore, I will still investigate further into the system.