



Towers Crescent Building B
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Final Presentation

Executive Summary

Throughout the year, I have studied the current design of Towers Crescent Building B, as well as proposed two alternate structures to compare to the design of the building. Much was learned through checking the existing structure and designing my own alternate structures.

The existing structure is composite steel with braced frames for lateral support. This design was quite efficient, especially when considering constructability and time of construction.

The two alternate structures are concrete flat slab designs, with the first using the same column layout as the original design and the second adding a row of columns. The first alternate design employs the use of post tensioning and slab beams to counteract the forces and deflections on the structure. The second alternate design uses drop panels and smaller bays to limit deflection and loads on the columns.

Height was not considered to change between designs for Building B due to the importance of the architectural design of the structure. Had this been considered, it would have greatly influenced my decision on which design was the most efficient and economic.

I decided that the existing system was the best design for Towers Crescent Building B. It was the least expensive and took the least amount of time to build. It was also the simplest design to construct. Had height changes been considered in the design of the alternate structures, the second alternate structure would have been the best design. With the lowering of the story height, and the addition of a row of columns, this design would have been much less expensive and would not have taken much more time to construct than the steel structure.