

EXECUTIVE SUMMARY

The Towers at the City University of New York is a new residence hall for CUNY students and faculty. It is the first dormitory for the Manhattan college in its 185 year history. The building is located at 130th Street and Saint Nicholas Terrace in the upper west side of New York City. The 11 story building is capable of housing 600 CUNY students and faculty in 165 apartments. The total cost of development and construction of the Towers was \$54 million.



Some of the features of the 185,000 square foot building are fully furnished apartments with private bedrooms, a laundry room, a fitness room, classroom spaces, administrative offices, a reception desk that is operational 24 hours a day, and numerous lounge and study spaces. Ground was broken in May 2005 and was completed in August 2006.

The goal of this thesis project is to redesign to building structure using steel columns, steel beams and composite deck. Steel braced frames will also be implemented where the concrete shear walls were in the building. This will create a more regular column grid layout and eliminate the large concrete columns the corner window spaces.

In addition to the structural redesign of The Towers, other breadth topics will be studied to determine if they have any impact on the steel structural system. The first topic to be studied will be the impact on the construction schedule and cost from changing the framing system from concrete to steel. The second topic will be to determine if a LEED rating can be achieved for the building. A few credits will be studied in depth and to find more cost and energy efficient building systems that can be used in the building.