

## ***Executive Summary***

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This report details structural considerations for the design of the Renaissance Schaumburg Hotel and Convention Center located in Schaumburg, Illinois. Specifically, this report will focus on the main hotel's structural composition and performance.



The 17-stories of the Renaissance Schaumburg Hotel create quite an impressive display of engineering technology in the open landscape surrounding the city's newest and largest hotel. The 465,885 square feet of the hotel are supported by columns of reinforced concrete and steel. Most of the steel on this project is reserved for the convention center but in the first 3 floors of the hotel steel columns are used to transfer gravity loads from concrete supports above. The hotel has many unique features including a swimming pool located on the ground floor, a health center, a grand ballroom, secondary ballrooms, a restaurant, a large open atrium area, and 500 guest rooms. The scheduled completion date for the building is slated for July 2005, when the first visitors to the area can receive four-star service in one of the finest hotels that the Chicago area has to offer.

This report is limited to analysis based on the most current design documents made available for the Renaissance Schaumburg Hotel and Convention Center. Its function is to provide a detailed description of the structural systems in use, including those found in the foundation, slab construction, framing, and lateral force resisting systems. Simplified sketches have been included to further explain shear wall systems, framing plans, and lateral load distribution. Please see the appendix for other figures. Gravity, wind, and seismic loading are explored in this report, a summary of which can also be found in the attached appendix. This report will further detail the current existing conditions and structural concepts used in the design of the Renaissance Schaumburg Hotel and Convention Center.

