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Structural Option

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URS Office Building
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STRUCTURAL TECHNICAL REPORT 1

Structural Concepts / Structural
Existing Conditions Report



EXECUTIVE SUMMARY:

URS Office building located in Columbus, Ohio is a prototype construction for the Arena District. Nationwide Realty Investors is developing the Arena District to revitalize downtown Columbus. Built with the purpose of serving retail tenants on the ground level and office space on the floors above, large punched windows allow sufficient natural light to enter. The building façade was designed to reflect the essence of the Arena District while expressing independence and purpose. Adjacent to the Blue Jacket Arena the URS Office Building complements the Arena with its clean masonry façade with large industrial glass covering the window openings. Using the setback and curvature on the street side façade, the building footprint follows the contour of the site. This 5 story, 100,000 square foot building broke ground in March 2000 and was completed in January 2001. Total cost of project was \$7 million.

This report contains the detailed description of the structural system employed by the URS Office Building. In the structural systems section is the description of the foundation system, material strength, typical bays, and slab system. All beams and columns were rolled wide-flange and except for the slab on grade, the floor system was composite. Combination of moment frames and braced frames were found to resist lateral loads. Slight variation of BOCA was used to design the building, but all calculations performed in this report are based on the 2003 IBC. Loads were determined by the use of ASCE 7-05 and spot checks were performed with the load calculated.

This report was to understand the design process and become familiar with structural analysis as a whole. At the completion of the first technical report, the design document matched the calculations performed. The reason for the utilization of moment frame instead of additional braced frames and unequal loading to identical braced frames are being looked into.