

Nick Szakelyhidi  
Structural  
MK Parfitt  
Office Building, Washington, DC\*  
Technical Assignment 3  
11/21/05



All renderings courtesy of Dreyfus Property Group and KRJDA

## Executive Summary

The office building analyzed is located in downtown Washington, DC. It is a reinforced concrete flat-slab system with drop panels. The tenant floor slabs are post-tensioned, but this was not considered in this report. The controlling lateral loads on the building came primarily from the seismic analysis.  $1.2 \text{ Dead} + 1.0 \text{ Earthquake} + 1.0 \text{ Live} + 0.2 \text{ Snow}$  was therefore found to be the controlling load combination in most cases. The structure performed brilliantly in storey drift and building drift calculations.

Overturning and torsion were determined to not be issues with the building design. No member strength issues were evident during the hand calculations and computer modeling. The designed structure adequately dissipates all lateral forces safely and efficiently to the foundation system.

\*Building location withheld at owners request