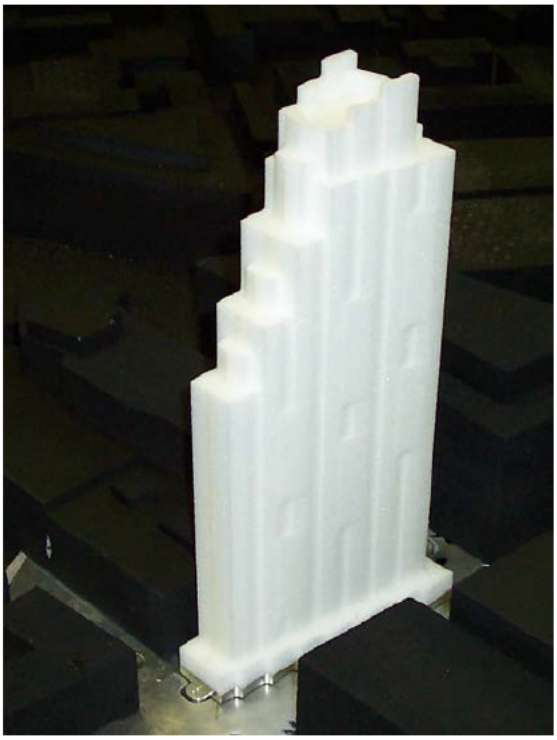
80 DeKalb Avenue, Brooklyn, New York

Wind Engineering Study



Client	Structural Engineer	Architect
Forest City Ratner Companies	WSP Cantor Seinuk Group PC	Costas Kondylis & Partners LLP
Height	**Year Tested**	**Model Scale**
415 feet	2006	1:400

The Project

The 80 DeKalb Avenue development in Brooklyn, New York is a 36-story tower that consists of 369 residential units, commercial space at the ground level and sub-grade parking. The total floor area of the tower is 35,187 square feet.

The site is located on the south side of Myrtle Avenue between Hudson Avenue and Rockwell Place.

The Wind Tunnel Studies

The wind engineering studies for the DeKalb Avenue project included wind-induced structural loads and responses and local cladding pressure loads.

The study of overall structural loads and responses was determined using the force balance technique.

A study of wind-induced cladding pressures was carried out for 399 measurement locations distributed over the two towers and podium.

A flow visualization study was conducted to investigate the overall airflow characteristics and locate regions of flow separation, reattachment and vortex formation.

The Boundary Layer Wind Tunnel Laboratory

Western

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FSTB/285/March, 2008/JHO
Last Printed: March 19, 2009