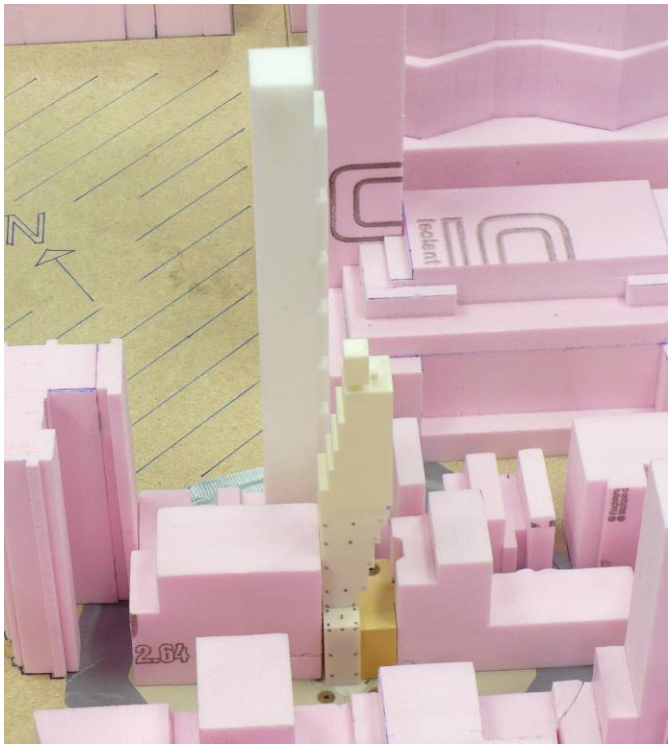
23 East 22nd Street, New York

Wind Engineering Study



Client	Structural Engineer	Architect
WSP Cantor Seinuk New York	WSP Cantor Seinuk New York	Office for Metropolitan Architecture (OMA), New York
Building Height	**Year Tested**	**Model Scale**
380.3 ft	2008	1:400

The Project

The project consists of a single tower that rises 380.3ft above the ground. The tower cantilevers to her east and overhangs an existing building.

The project site is on the 22nd Street, Adjacent to Madison Square Park, New York.

The Wind Tunnel Studies

The wind engineering studies for the Project included studies of the wind-induced structural loads and responses of the tower, local cladding pressure loads as well as pedestrian level wind conditions.

The study of overall structural loads and responses were determined for the tower using the force balance technique. A desk-top study of the preliminary structural loads was also performed.

A study of wind-induced cladding pressures was carried out for 186 measurement locations distributed over the tower and the podium.

Pedestrian level wind speeds were determined at 12 locations on the podium and around the project site. A flow visualization study was also conducted to investigate the overall airflow characteristics and locate regions of flow separation, re-attachment and vortex formation.

The Boundary Layer Wind Tunnel Laboratory

Western

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