# 270 Greenwich Street, New York, NY, USA

## Wind Engineering Study

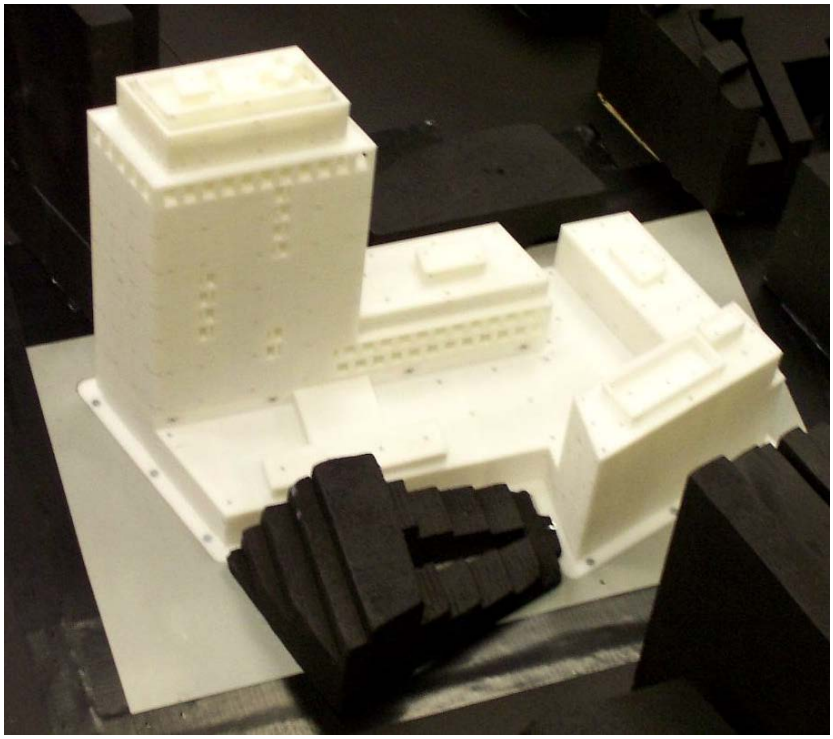

Image Credit: The 7th Art

| Client | Structural Engineer | Architect |
|---|---|---|
| E. J. Minskoff Equities, Inc. | WSP Cantor Seinuk Group | Skidmore, Owings & Merrill LLP |
| **Height** | **Year Tested** | **Model Scale** |
| Condo Tower – 411 feet<br>Rental Tower – 160 feet | 2005 | 1:400 |

### The Project

The 270 Greenwich Street development in New York City, New York consists of two towers connected by a common 2-storey podium. The first tower is a 32-storey residential condominium and the second is a 12-storey residential rental complex. The site is located in lower Manhattan and is bounded by Warren St., West St., Murray St. and Greenwich St.

The rental and condominium complexes will accommodate approximately 175 and 249 units respectively. As well, a parking complex will be constructed one level below grade.

### The Wind Tunnel Studies

The wind engineering studies for 270 Greenwich Street included a study of the wind-induced structural loads and responses and local cladding pressure loads.

The study of overall structural loads and responses were determined for the condominium tower using the force balance technique.

A study of wind-induced cladding pressures was carried out for 461 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, re-attachment and vortex formation.

**The Boundary Layer Wind Tunnel Laboratory**

Western

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