164 Kent Avenue, Brooklyn, NY, USA

Wind Engineering Study

Image Credit: RD Management LLC/ L&M Equity Participants Ltd.

Client	Structural Engineer	Architect
RD Management LLC	M.G McLaren P.C. Consulting Engineers	Fox & Fowle Architects
Height	**Year Tested**	**Model Scale**
Condominium-Tower – 323 feet Low-rise complex – 60 feet	2005	1:400

The Project

The 164 Kent Avenue development in Brooklyn, New York consists of a 30-storey residential tower and a low-rise building. The site is located in Brooklyn and is bounded by the East River, 164 Kent Avenue, North 5th Street and North 4th Street.

This tower is the first and the smallest of three sister towers intended for the site. The residential tower will accommodate 180 units in approximately 350,000 square feet. The adjacent 6-storey mix used low-rise building will provide 113 units of housing and will contain approximately 17,000 square feet of retail space.

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The Wind Tunnel Studies

The wind engineering studies for 164 Kent Avenue included a study of the wind-induced structural loads and responses, local cladding pressure loads and pedestrian level winds.

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

A study of wind-induced cladding pressures was carried out for 229 measurement locations distributed over the tower.

The Boundary Layer Wind Tunnel Laboratory

Western

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