Ravenna Condominium, Bonita Springs, FL, USA

Wind Engineering Study

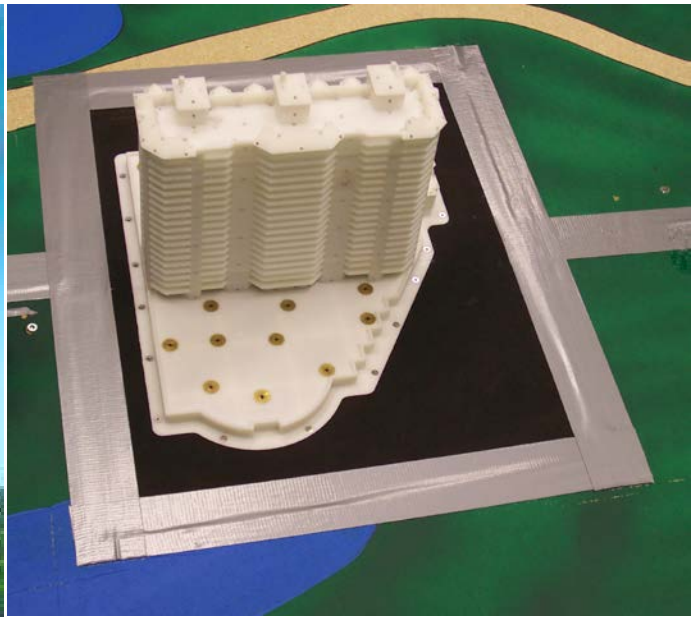

Image Credit: WCI Communities Inc.

Client	*Structural Engineer*	*Architect*
WCI Communities Inc.	Bob Rude Structures Inc.	Robert M. Swedroe Architects
Height	*Year Tested*	*Model Scale*
230 feet	2006	1:400

The Project

The Ravenna Condominium development in Bonita Springs, Florida consists of a 21-storey residential tower. The site is located at the Colony Golf & Bay Club and is bounded by Estero Bay and Pelican Colony Boulevard.

The tower sits on a one-storey podium which accommodates approximately 230 parking spaces. The amenity level offers a fitness room, social room, grand salon, pool pavilion and spa.

The Wind Tunnel Studies

The wind engineering studies for the Ravenna Condominium 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 tower using the pressure integration technique.

A study of wind-induced cladding pressures was carried out for 475 measurement locations distributed over the tower.

The Boundary Layer Wind Tunnel Laboratory

Western

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