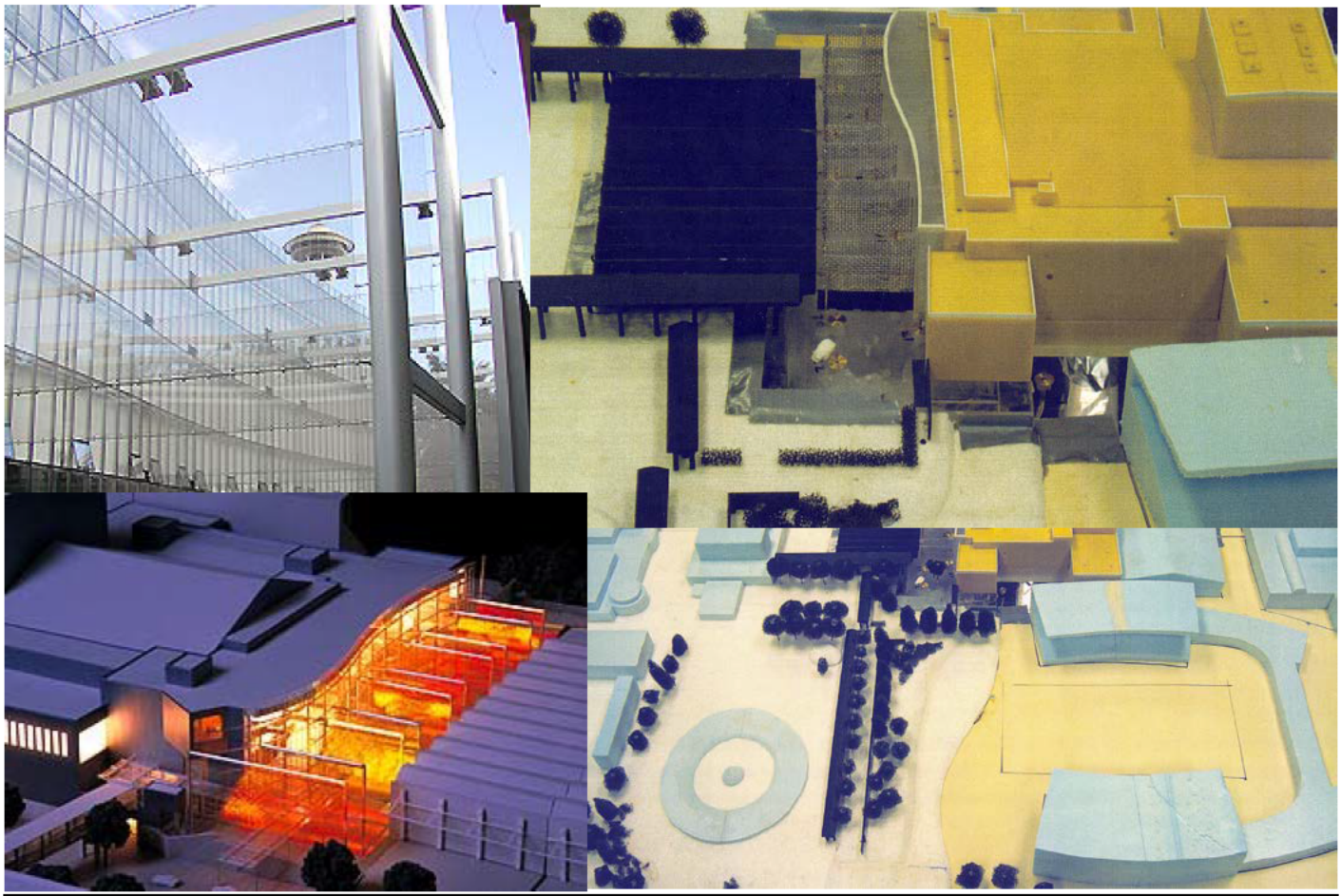
Marion Oliver McCaw Hall, Seattle, WA, USA

Wind Engineering Study



Client	Structural Engineer	Architect
LMN Architects	Magnusson & Klemencic Associates	LMN Architects
Height	**Year Tested**	**Model Scale**
5-Storey Concert Hall	2000	1:300

The Project

The Marion Oliver McCaw Hall at the Seattle Center was a transformation of a 75-year old civic auditorium/opera house. The revised hall has a 2,900-seat auditorium and a 400-seat Lecture Hall.

Its main features are a 5-storey curved glass façade on the west side of the building and a number of shear metal screens or scrimes, which are illuminated with coloured lights that are choreographed. The lit screens are located above the main entrance to the hall.

The Wind Tunnel Studies

The wind engineering studies for Marion Oliver McCaw Hall included a study of the local cladding pressure loads and pedestrian level winds.

A study of wind-induced cladding pressures was carried out for 169 measurement locations distributed over the entire hall but with the main emphasis on the west wall.

A study of pedestrian level winds was carried out for 22 measurement locations located on the west side of the building, focusing on the main entrance and the Kreielsheimer Promenade. The area was examined for a number of possible design scenarios.

The Boundary Layer Wind Tunnel Laboratory

Western

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FSTB/ 257 /December 2006 / RTE
Last Printed: March 19, 2009

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