

Project: One World Trade Center
Location: New York, NY
Architect: SOM
Products: Storm Resistant Louvers

About the Project

The rebuilding of One World Trade Center after the 2001 attacks helped to reconstruct America's sense of strength and freedom. As the sixth-tallest building in the world, this beacon of hope stands at 1,776 feet to showcase America's resilience. A building of this magnitude requires a significant amount of protection from the elements.

Design Goals

Providing a louver that didn't look typical but still functioned as such was a priority for the architects at SOM. From a technical standpoint, the designers required a significant amount of airflow to pass through the louvers, low pressure drop and absolutely no water entry.

Results

CS worked with SOM and the mechanical engineer to design and develop a Class A-rated, wind-driven louver system specifically for the project's needs. CS created a new custom model using pieces from three existing louvers. The new system supplied the required air performance and water resistance across 18 floors for the building's HVAC system. We proved the louvers' performance by replicating the exact weather conditions in our exclusive test chamber.

Continued on the other side...



At a Glance:

One World Trade Center stands stronger than ever as the sixth-tallest building in the world, complete with CS' storm resistant louvers, which meet the air performance and water resistance needs of the structure.





The tested, completed result is a louver system that works within the building's monolithic design—in between a security grille and open glass panes on the lower floors. Our louvers act as a reverse plenum to stop water, even while fully exposed to the elements on the uppermost part of the tower. These louvers are angled back 18 degrees and notched at the corners to match the building's exterior skin. Our louvers provided a unique solution for one of the world's most symbolic buildings, allowing them to breathe new life into the once-destroyed area.

