

# Mahanakhon Tower

client PACE Development & King Power

period 2011-2019

GFA 150,000m<sup>2</sup>

height 314m

floors 77

architect Hok Lok Siew with Buro Ole Scherren

contractor Peterson 1990 (Tower), Permasteelisa (Cube)

residential

hotel

unitised curtain wall

semi-unitised

structural glass



Bangkok's most iconic modern building with the highest and most dramatic public access space in the city.

The building's famous spiralling pixellated form seems simple but requires a large number of challenging interfaces.

The facade consists of two major systems, the 'pixel' facade and the 'cassette' facade. These both combine with terraces, balustrades, soffits, internal and external corners, swing and sliding doors, duplexes, privacy screens, mechanical floors and varying windload zones to produce tens of different interfaces between facade system types, all of which needed to be cleanly resolved in order to maintain the purity of the form.

The clean detailing hides the complexity within.

Facade Associates produced Design Development and Tender Documentation for all the Facades of the Tower and Cube, and designed the Maintenance Access and Replacement strategy, we then assisted in selecting tenderers, assessed Facade Tender returns, reviewed all contractor submissions, and made regular

site and factory inspections until completion.

Due to the high number of different facade interfaces, systems and loading conditions there were a total of nine performance mock-up tests, each one verifying a critical aspect of the facade.

Our pro-active and problem-solving approach enabled us to work cooperatively with the Facade Contractor and help resolve the many construction challenges.

Roof space is at a premium and there is little room for large permanent access equipment. We designed and placed a system of davit bases, soffit rails and operable windows in mechanical floors to enable all areas of the facade to be cleaned and glass to be replaced. The operable windows of the mechanical floors are detailed to be nearly indistinguishable from typical panels,

The building was bought by King Power in 2018 and Facade Associates were asked to continue and assist in the redesigned Skybar zones at the roof.

Facade Associates designed all elements of the rooftop facade with the exception of the cylindrical lift and the floor glass of the skytray (by a German contractor). Our scope included all balustrades, stone floors, benches and steps, accessible drainage for the skytray, concealed davit bases and maintenance access rails under the skytray.

Mahanakhon continues to be the benchmark for challenging tall building facade engineering in Bangkok and we are proud to be the Facade Consultant to deliver on this icon.

