

Wuhan New Railway Station

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China

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Wuhan, the capital of central China, is adjacent to nine provinces. Standing on the Yangtze river, at the confluence with the Han river, Wuhan is surrounded by lakes and hills. It is a very ancient city, steeped in history and legend, and today is seeing extremely rapid growth.

Identity of the station

Wuhan's new mainline station is a symbol both of age-old traditions and the city's spectacular modern-day development. The architectural concept, based on the upward sweep of roof structures systematically organised into two large wings around a central concourse running east to west, illustrates one of the best-known traditional Wuhan legends. It evokes the flight of a large bird, a legendary yellow crane, whose return to the area announced an era of prosperity and happiness. Richly symbolic, the 9-part roof structure also echoes Wuhan's position, surrounded by nine provinces. The majestic sweep of the roof which reflects the image of the station is also the image of contemporary Wuhan and its unprecedented economic development. Thus, the image of the station embodies an ancient traditional composition ("a broad roof that braves the sky on a massive base rooted in the earth") but projects it in a highly contemporary idiom. With its monumental presence in the city, the station, a contemporary palace, is steeped in the city's culture and values, both modern and historic. It forms a gateway to the city, welcoming the hundreds of thousands of passengers arriving daily by fast, modern trains from the nearby provinces. Like a balcony overlooking the city, the station's upper levels on the west side offer outstanding views of the surrounding lakes and hills and of the city of Wuhan itself. At the same time as it projects this powerful identity, form follows function. The body of the "bird", aligned with the axis of on-going urban development, houses the access, reception, waiting and service functions. Platform access footbridges are central to the overall composition. The interplay of footbridges and different levels forms a three-dimensional space beneath the great roof, punctuated and enlivened by the comings and goings of passengers and trains. The diversity of routes through the station provides constant interest for passengers using an amenity that is simultaneously efficient and poetic, always fluid, and perfectly intelligible. The lateral wings deployed on either side of the central body cover the full span of the platforms. The spans comprise partially overlapping angled roof segments in a succession of smaller aerofoil shapes open to the sky. They protect the platforms very effectively, at the same time as they filter the natural daylight. The overall west-oriented composition indicates the direction of the city.

Levels

- Level +24.00m: services, restaurants.
- Level +17.20m: departure concourses, services and waiting rooms.

- Level +10.20m: train platforms. Ticket sales are located on this level, on intermediate landings between the ground level and departure concourses.
- Level ± 0,00m: arrivals concourse and transfers between urban and regional transport modes.
- Level -6.00m: metro platforms

Exterior spaces

The garden plays two roles. As a means of access to the station, it forms the transitional space between the city and the station, ensuring continuity of landscape between the two lakes, one to the north, the other to the south. A gentle, 3% slope ensures easy walking between the city and the station's reception levels, making getting from A to B easy and natural. The extensive mineral esplanade is aligned with the station's central axis. Also on this axis is the glass roof of the metro station and city-side metro access. The garden laid out on either side of the esplanade follows the slope. The waters from the adjacent ornamental lakes meet on the esplanade. The sloping esplanade forms the massive, monumental base above which floats the station's aerial, undulating roof structure.

Materials and structures

A range of simple, authentic materials is used for the structure of the building's shell:

- light-coloured concrete for the viaduct spans and transport supports,
- metal for the roof and its load-bearing structures, above platform level,
- glass to provide transparency on the façades overlooking the city and the natural landscape in the foreground.

The roof is supported by a series of posts, arches and metal stays. The arches and posts are erected above the +10.20m level and flow upwards. In the central area of the dome, along the entire length, alternating glass and metal bands allow daylight to enter along the station axis. The light is diffused through perforated metal soffits. The upper surfaces of the lateral wings are clad with translucent polycarbonate. Along the valleys, a wide strip of glass ensures the transition between the full exterior sunlight and the daylight falling on the platforms diffused through perforated roof soffit panels. These panels also act as noise absorbers.

Inside the station, light colours predominate, playing on variations of white. They create a muted ambience enriched by all the natural shades of daylight throughout the day.

Project delivered in 2009

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