



The Anji Bridge (simplified Chinese: 安济桥; traditional Chinese: 安濟橋; pinyin: Ān jì Qiáo; literally: "Safe crossing bridge") is the world's oldest open-spandrel segmental arch bridge of stone construction. Credited to the design of a craftsman named Li Chun, the bridge was constructed in the years 595–605 during the Sui dynasty (581–618). Located in the southern part of Hebei Province, it is the oldest standing bridge in China.

History

Starting from 581 CE, the Sui dynasty reasserted imperial control over the competing powers that had ruled various regions of China since the decline of the Han dynasty in the third century. Thus immense public works projects were carried out, including the rebuilding of two grand imperial capitals, the excavation of the 2400-kilometer-long Grand Canal, and major improvements to the fortifications that predated the Great Wall. Economically, the long-distance transport of goods and men was a critical component to the interests and sustainability of the ruling house. The movement of goods by land south and southwest from the North China Plain to the Central Plains around Kaifeng and Luoyang followed a path that crossed the Xiao River near Luanzhou (later Zhaozhou and now Zhaoxian) in today's Hebei province. Flowing west to east through a plain that was relatively low-lying on both sides, the Xiao River was an important artery for transporting goods, but an impediment to continuous overland movement and the economic integration of China's regions.

It was under these circumstances that Li Chun, who directed masons and other craftsmen, built the Anji (Safe Passage) Bridge, also called Dashi (Great Stone) Bridge. Although Chinese history credits Li Chun with the design and building of the Anji Bridge, no contemporaneous materials recorded the process, however later chronicles do make notes of it in brief.

Among the most remarkable achievements of Chinese bridge building-indeed an advancement unrivaled in the world-was the creation of this segmental arch bridge of wholly stone construction. This innovation, which occurred between the end of the sixth century and beginning of the seventh century, repudiated conventional wisdom that a semicircular arch was necessary to transfer the weight of a bridge downwards to where the arch tangentially meets the pier. The double pair of openings piercing both ends of the arch spandrel, which as well as accentuating its lithe curvature, lightens the weight of the bridge and facilitates the diversion of flood waters by allowing them to pass through the auxiliary arches rather than pound against the spandrels. The Zhaozhou Bridge is celebrated as China's oldest standing bridge and the oldest open spandrel stone bridge in the world.