**Changhemen Gate-site of the Northern Wei Palace-city in Han–Wei Luoyang City, Henan**

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Han–Wei Luoyang City was the royal or national capital of ancient China in the Eastern Zhou, Eastern Han, Cao Wei, Western Jin and Northern Wei dynasties. In November 2001 to June 2002, our team carried out here an overall excavation on a large-sized gate-site discovered through previous surveys, which is located at the southern wall of the Northern Wei palace-city, on the northern side of the opening in the western section of the wall (Fig. 1). In the excavation area of 8,320 sq m, 82 trial grids of $10 \times 10$ m and three of $10 \times 4$ m were laid out with an azimuth of 4 degrees, corresponding with the orientation of the gate-site. It has been confirmed that the site is left over from the Changhemen 闾阖门 Gate, the main gate of the Northern Wei palace-city.

**I. Stratigraphical Deposits**

The excavation area is located on a second terrace with the north 1.4 m higher than the south. Owing to the great difference in height between the ancient ground and the remaining surface of the ruined buildings, the layers superimposed on the vestiges are rather uneven in thickness. Their composition can be exemplified with the southern sections of trial grids T307–T310 on the southern side of the gate platform.

Layer 1, cultivated soil, gray, soft, rather impure, 0.25–0.3 m thick.

Layer 2, disturbed soil, grayish-brown, loose, rather impure, mixed with some fragments of lime wall-coatings, 0.25–0.9 m deep beneath the ground and 0.5–0.6 m thick, containing a small quantity of plain or polished tile shards, broken bricks and stones.

Layer 3, deposits from the Tang–Song period, yellowish-brown, loose, quite pure, 0.8–1.2 m deep beneath the ground and 0.2–0.5 m thick, containing broken bricks and some polished tile shards.

Layer 4, underlying earth of the Northern Zhou period, yellowish-white, fairly hard and quite pure, mixed with roughly equal-sized white clay-agglomerated grains, 0.8–1 m deep beneath the ground and 0.1–0.3 m thick.

Layer 5, consisting of cultural deposits of the Northern Wei period, brown soil, loose, rather impure with some lime lumps mixed in, 1.2–1.45 m deep beneath the

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Fig. 1 Reconstructed plan of the palace-city of Northern Wei Luoyang
ground and 0.25–0.4 m in thickness, containing more shards of plain or polished semi-cylindrical or flat tiles and a small quantity of broken bricks, stones, lotus-flower or animal-mask tile-ends, lotus-bud-shaped iron structural members and pottery shards. Beneath it remains the floor of the Northern Wei period.

II. Site of the Northern Wei City-gate

The whole excavation area measures 110 m in the maximum length from the north to the south and 120 m in the maximum width from the east to the west. The site has all been revealed, including the gate foundation-platform, the eastern and western gate piers in front of it, the square between the piers, and parts of the building groups on the flanks of the gate. Judging from the distribution of the vestiges, the gate-tower must have stood on a large-sized rammed-earth platform built on the northern side of the opening in the southern wall of the palace-city. At the two ends of the opening are paired gate piers, which are joined not only onto the city wall, but also to the city gate by the enclosures of the flank building groups. Thus they formed a complete city-gate complex in a novel style (Figs. 2 and 3).

1. Vestiges of the city-gate include the remains of the foundation-platform, the gate itself and short rammed-earth walls.

Remain of the foundation-platform is rectangular in plan, 44.5 m long and 24.4 m wide, the major axis pointing to the east and west. As the interior and exterior sides of the gate are varied in the elevation of the ground,
the protecting walls of platform in these places are different in remaining height: about 0.25 m for the northern side and some 0.55 m for the southern one. They are largely plastered with lime, and some encasing bricks remain in the north (Fig. 4). The platform is built of yellowish- and grayish-brown rammed-earth, which is pure and rather hard. The ramming traces are mostly round and flat-bottomed, 6–7 cm in diameter; and the rammed layers measure 7–12 cm in thickness.

Remains of the superstructure are the vestiges left over from the superstructure of the gate include the remains of a column net, gate-ways, rammed-earth partitions between them, platform-shaped structures on both sides, and gentle ascents (Fig. 5).

The remaining column net consists of 40 plinth pits arranged in five rows from the north to the south and eight lines from the east to the west (Fig. 6). They suggest that the gate was a pavilion-style building seven-bay in width and four-bay in depth. The pits vary in size and depth, the larger ranging from 1.7 m to 2.8 m in side length and from 0.45 m to 0.62 m in depth, while the smaller from 1.25 m to 1.7 m and from 0.2 m to 0.45 m respectively. The bottom is generally overlaid with yellow sand.

The gate-ways are three, each measuring 8.6–8.8 m in length, or two-bay in depth, and 4.7–4.8 m in width. The remaining rammed-earth partitions between the three gate-ways are 8.8–8.9 m long from the north to the south and 6.8–7 m wide from the east to the west for the eastern partition and 8.6–8.7 m long and 6.9–7.1 m wide for the western one. The vestiges of the platform-shaped structures measure 19.5 m long from the north to the south and 6.8 m wide from the east to the west for the eastern structure, and 19.5–19.6 m and 6.7–6.9 m respectively for the western one. These buildings bear lime wall-coatings that measure 1–4 cm in remaining height.

There are two rooms (F1 and F2) in the northern half of the platform-shaped structures. F1 in the western structure measures 6–7.4 m from the north to the south, 3 m from the east to the west, and 1.8–2 m in wall width. Inside, 2–5 cm high lime coatings remain on the eastern, western and northern walls. The door is opened in the western wall, at the northern end, facing the gentle ascent that runs across the western side of the gate platform. On the floor, nine post-holes in two rows were discovered in the excavation. F2 is roughly symmetrical to F1. It is very likely that the two rooms are left over from the staircases leading to the gate-tower.

The gentle ascents are built on the four sides of the
gate platform, numbering eight: three on both the northern and southern sides, each in the middle reaching 8.25 m in width and that in either flank, 6–6.25 m. The other two ascents are in the northern half of the platform, on the western and eastern sides, each measuring 3.75 m in width.

Two short rammed-earth walls are built on the flanks of the gate. They join an auxiliary building group each and measure 5.4–5.5 m in length and 1.7–1.8 m in width. The remaining height is 0.26–0.35 m for the northern side and 0.5–0.6 m for the southern side, a difference caused by the ground higher in the north and lower in the south. The wall surface is plastered with lime.

2. Remains of the eastern and western building complexes

There is a building complex on either of the eastern and western sides of the gate, each being divided into two independent compounds by a rammed-earth wall. They are poor in condition except for the enclosures. In Compound 1 located in the south of the western complex, the northern wall is 12.3 m in remaining length, 1.9–2.2 m in width and 0.25–0.4 m in remaining height. The eastern wall is 33 m long, 2.1 m wide, and 0.55–0.75 m and 0.1–0.2 m in remaining height for the external and internal sides respectively. Traces of lime coatings are discovered on the outer surface. The gate is opened in the northern section of this wall, measuring 3.5 m in width.

In Compound 2 located in the south of the eastern complex, the northern wall is 12.4 m in remaining length and 1.7–1.95 m in width. The western wall is 28 m long, 2 m wide, and 0.6–0.7 m and 0.1–0.2 m in remaining height for the outer and inner sides respectively. Lime coatings are seen on both surfaces (Fig. 7), and the gate is also opened at the northern end, with a width of 4.65 m. Compound 3 lies in the north of the western complex. Its southern wall is just the northern wall of Compound 1. The eastern wall joins that of the latter, measuring 7.7 m in remaining height, 2.5 m in width, and 0.2 m and 0.4–0.5 m in remaining height for the inner and outer sides respectively. On the outer surface are also traces of
lime coatings. Compound 4 is situated in the north of the eastern complex. It also shares the same east-west wall with Compound 2, and the western wall extends from that of the latter, measuring 15.3 m in remaining length, 2.1 m in width and 0.35–0.5 m in remaining height. Its outer surface bears broken lime coatings. The gate is also opened in the western wall, with a width of 4.1 m.

3. Remains of the paired gate piers, including the pier foundations and a square.

The remaining pier foundations are located on the southern side of the gate, at the ends of the opening in the southern wall of the palace-city. Each of these structures consists mainly of the rammed-earth underground base of the large-sized pier body and the foundations of the outer side of the pier platform (Figs. 8 and 9).

Each structure has a L-shaped plan, with the bottom lying at a depth of 4 m beneath the ancient ground. The width from the east to the west reaches 36–36.5 m while the length from the north to the south, 37–37.5 m, and the pier body must have been built in the middle part of the base. The inner protecting wall of the platform is all gone as the ancient ground in this part has been damaged. On the outer side, owing to the less height of the ancient ground, there remain a brick-covered foundation-ditch, a part of brick course and traces of the lime coating of the protecting wall (Fig. 10). Just from these remains we know that the gate piers were L-shaped in plan, each consisting of a main body and two subordinate structures, and were arranged symmetrically.

The eastern platform is 29 m wide from the east to the west and 29.4 m long from the north to the south. The main body measures 22.8 m in width from the east to the west and 23.1 m in length from the north to the south; the eastern subordinate structure, 6.2 m in width from the east to the west; and the northern one, 6.3 m in length from the north to the south.

The western platform is 29 m wide from the east to the west and 29.1 m long from the north to the south. The main body measures 22.7 m in width from the east to the west and 22.8 m in length from the north to the south; the western subordinate structure, 6.3 m in width from the east to the west; and the northern one, 6.3 m in length from the north to the south.

The square lies to the south of the gate, between the eastern and western gate-piers. It measures 41.5 m in width from the east to the west and 37 m in length from
the north to the south. The ground has been seriously damaged. No material for pavement was found. Only traces of a hard surface formed of yellowish- and grayish-brown earth are scattered in some spots.

III. On the Dates of the Construction and Function of the City-gate

In the excavation course, plentiful vestiges were found to be remains of the renovation or repair of the gate in different periods. For example, in Trial Ditch J1 dug in the top of the southern palace-city wall, the remaining wall body is found to consist of three masses of rammed earth. They are appended to the southern side of a sterile soil layer with the north higher. On their outer side, there are at least three strata formed of slope-protecting coverings and underlying deposits, which were contemporary with the gate and, as the unearthed objects suggest, belonged to the Wei–Jin, Northern Wei, and Northern Zhou periods respectively.

In the platform of the gate, the narrow walls of the side building complexes and the platforms of the gate-piers, excavation also revealed by trial-ditch digging vestiges of a Northern Zhou city-gate and those of a Wei–Jin city-gate. They lie, respectively, above and beneath the remains of the Northern Wei city-gate. So they can be dated, respectively, later and earlier than the Northern Wei period and correspond to the above-mentioned three phases of slope-protecting coverings and underlying deposits revealed outside the southern palace-city wall. These suggest that the city-gate was not greatly changed in basic layout and size although it went through repeated repairs and continuous use at least in three periods: the Wei–Jin, the Northern Wei, and the Northern Zhou.

Within the ruins of the city-gate and gate-piers, excavation also brought to light remains of underground drainage systems built in various periods, including water-gathering pools, covered ditches and water seepage pits. G4 in the second compound is a better preserved drainage system. It consists mainly of a water-gathering pool, a water-receiving pool, a channel, a water gate, and a covered ditch (Fig. 11). The water gate is built of livid stone slabs, the bottom bearing diamond sockets for iron bars, which measure 10–12 cm in diameter and containing a bit of iron duct. These facilities were built roughly in the Wei–Jin period and abandoned in the Northern Zhou.

IV. Unearthed Objects

Most of the unearthed objects are building materials, such as pottery bricks, tiles, chiwen-ridge ornaments and animal-mask bricks, stone slabs, and iron structural members. The ceramic vessels are small in number and belong to the types of jar, vase, box, basin, and bowl. The porcelain is still less, belonging to the pot, bowl, etc.. The
metal artifacts include iron tools, iron and bronze weapons, and copper coins. Among the bricks the rectangular are more than the square. They have plain surfaces or bear square patterns, mat impressions and cord marks, and vary widely in size. The tiles are great in quantity, mostly broken, and fall into two types: flat and semi-cylindric. Among them are plain or polished products of the Northern Wei period, basket-impression ones of the Wei–Jin period, and cord-mark ones of the Han–Jin period. Some bricks and tile shards bear incised characters and stamped seals. The tile-ends fall into three categories: cloud design tile-ends of the Han–Jin period, lotus-flower design ones of the Northern Wei, and animal-mask decorated of the Northern Wei (Fig. 12). Besides, there are lotus-bud-shaped iron structural members (totaling 82), and copper “wu zhu 五铢,” “da qian wu shi 大钱五十,” “bu quan 布泉,” “chang ping wu zhu 长平五铢,” and “wu xing da bu 五行大布” coins.

V. Conclusions

The gate-site lies to the south of the main pavilion Taijidian of the palace-city and to the north of Tongtuojie铜驼街 Street and the main gate Xuanyangmen 宣阳门 of the greater city. Judging from the distinctive location as well as from the size and layout of the whole site and the date of its construction determined in the light of its unearthed objects, it should be exclusively identified as the Changhemen Gate flanked by magnificent gate piers. A comprehensive study suggests that it was just the palace-city’s main gate Changhemen that functioned continuously from the Wei–Jin to the Northern Wei periods. This is also completely conformable to the textual records on the time of the emergence of “Changhemen” as the name of the palace-city’s main gate in
ancient Luoyang City, as well as on the evolution of this gate.

As a palace-city’s main gate with paired piers in an ancient capital, it is the earliest in this type of building site excavated so far in Chinese archaeology. Among the unprecedented finds from there are such unique architectural features as being located a little behind the palace wall rather than in the same line with it and being furnished with paired piers joined onto the palace wall rather than projecting from it.

The gate was built on a rammed-earth platform and erected as a pavilion with a perfect column net, occupying an area of seven bays in width and four bays in depth. There are no remains of ascending ramps on the rammed-earth walls that join the two piers to the flank building complexes respectively, and each flank platform contains a staircase-like long narrow room. So it can be inferred that ascending to and descending from the gate-tower was not by ramps usually built on rammed-earth walls, but through the staircases in the flank platforms. This pavilion-style city-gate is distinctly different from later prevailing ones that had raised beams supported by pillar rows as well as from still later archway-style gates. Such structure must have been concerned with the requirement to emphasize the ritual function of the city-gate.

The eastern and western gate-piers left behind no vestiges of ascents. There remain only rammed-earth underground bases on the inner sides. But judging from the size of the remaining pier-platforms and the L-shaped plan, as well as related textual records and wall paintings, their upper parts must have been stories that met their watching and ritual function. The L-shaped plan with two subordinate parts added to the main body constitutes a strongly distinctive feature. Its discovery made up an important gap in the study of the gate-pier architecture characteristic of ancient China.

The identification of these ruins as the remains of the palace-city’s main gate Changhemen built during the construction of the Luoyanggong 洛阳宫 Palace in the early Cao Wei period is of great significance. It will offer reliable clues for inquiring into the location and layout of Luoyanggong and, moreover, will make a breakthrough for searching the location of the Han period Northern Palace in ancient Luoyang City. That is to say, the present results will contribute to confirming the inference that the Northern Wei palace-city was the continuation of the Wei–Jin palace-city and that the latter in turn was built on the site of the Han period Northern Palace. Thus we will further verify that a unitary palace-city form was maintained during the Wei–Jin period. This will be not only an important achievement in the study of the planning of ancient capitals, but also a great breakthrough in archaeological researches on Luoyang City of the Han–Wei period.

References


Note: The original paper, written by Qian Guoxiang 钱国祥, Liu Rui 刘瑞, and Guo Xiaotao 郭晓涛, was published in Kaogu 2003.7: 20–41 with 13 figures and 3 pages of plates appended to the text. The present version, an abridgment from the original, is prepared by Qian Guoxiang and English-translated by Mo Runxian 莫润先.