

# Architectural Complex VI of Changle Palace, Han Chang'an City in Xi'an

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**Abstract**

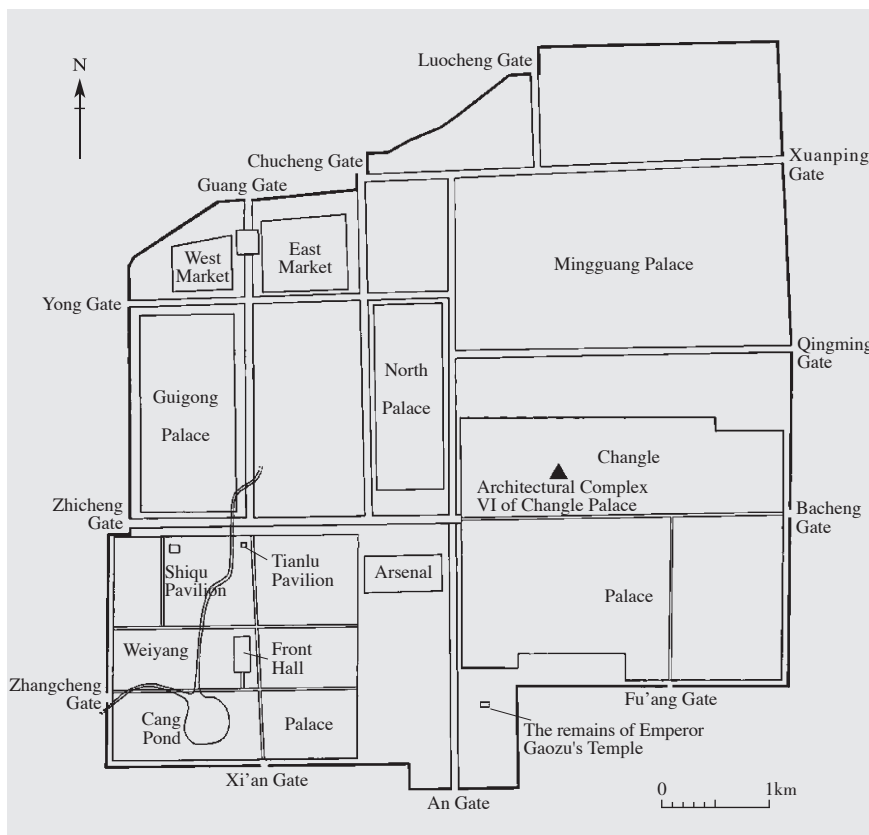
From November 2005 to January 2006, Han Chang'an Archaeological Team of the Institute of Archaeology, Chinese Academy of Social Sciences excavated the northern periphery of Architectural Complex VI located in the northwest of Changle Palace site. The primary result was bringing to light a pair of auxiliary compounds on the east and west wings of the main hall of Complex VI. The auxiliary compounds comprised of structures of halls, verandas, rain aprons and open-air courtyards. The hall structures were indicated by raised rammed-earth foundations, rows of stone pillar bases on the perimeter, and a set of semi-subterranean features in the west compound. The floors of the verandas were lined with square bricks, flanked by rows of stone pillar bases with occasional traces of wooden pillars. The rain aprons were paved with pebbles and rectangular bricks. The courtyards featured water systems comprised of wells, saturation pools, pipelines, runoff ditches and drainage. The assemblage of material remains comprised mainly of architectural components of semi-cylindrical tiles, flat tiles, tile-ends, bricks, pipes, well curbs, etc., and a small amount of pottery, iron and bronze artifacts, as well as bronze coins. The chronology of the material remains and their context suggested that the complex was built in the early years of Western Han and continued to be occupied till the Wang Mang Interregnum. Combined with previous archaeological findings and historic documents, complex VI was most likely the front hall of Changle Palace.

**Keywords:** Architectural foundations; Auxiliary architectures; Changle Palace; Han Chang'an City (Xi'an City, Shaanxi)

**Introduction**

From November 2005 to January 2006, the Han Chang'an Team of the Institute of Archaeology, Chinese Academy of Social Sciences carried out a planned field project at the locality of architectural complex VI of the Changle 长乐 Palace (Palace of Eternal Happiness) site. The excavation consisted of six 20 x 16m units with some unit extensions, revealing a total of 2, 327sq m of historic occupation.

The excavation zone was situated to the north of Luo-jiazhai 罗家寨 Village of the Weiyang 未央 District, Xi'an City, Shaanxi Province, which was the northwestern part of the site of Changle Palace of Western Han (Figure 1). The main body of Complex VI stood to the south of the excavation zone. The excavation revealed the northern periphery of the raised foundation of the main structure of Complex VI and its auxiliary architectural groups in the east wing (auxiliary compound I) and the west wing (auxiliary compound II). Each of the auxiliary



**Figure 1** The location of the Architectural Complex VI of Changle Palace.

groups comprised of halls, verandas, rain aprons, and open-air courtyards. Most of the hall structures had been destroyed, leaving only the raised rammed-earth foundations and rows of stone pillar bases on the periphery. Excavation at compound II also yielded a group of semi-subterranean features. The floors of the verandas were laid with geometric-patterned square bricks with remains of stone pillar bases and occasional traces of wood pillars on both sides. The rain aprons were lined with pebbles and rectangular bricks. A group of wells, saturation pools and pipelines in the courtyards suggested the installation of a water supply and drainage system. An east-west subsurface passage was founded between the main body of Complex VI and the auxiliary compounds. The material remains recovered during the excavation suggested that the auxiliary compounds were constructed during the early years of Western Han and continued to be occupied till the Wang Mang Interregnum. Moreover, architectural features dated to Qin or Warring-States eras were found superimposed by compound II.

### Stratigraphy

The deposition can be partitioned into three layers. In the following, we are going to illustrate the stratigraphy with the east wall of unit T1 extension.

Layer 1: Plow zone. Grey loose soil, 0.13-0.21m thick.

Layer 2: Modern disturbed zone. Light yellow, medium compact soil, 0.13-0.37m deep, and 0.16-0.3m thick. This layer yielded fragments of Han brick and roof tile, modern iron wire and potsherds.

Layer 3: Han cultural zone, loose yellowish grey soil, 0.32-0.69m deep, and 0.18-0.25m thick. The Han deposition comprised of the ruins of historical architectures and a rich artifact assemblage comprised of bricks, roof tiles, tile-ends, pottery stands, iron nails, iron implements, and bronze coins.

The stratum immediately underneath layer 3 was the ground level and architectural foundations of the Western Han. It had not been excavated.

### Structures of the early phase

1. Architectural features. An earlier structure (F2) superimposed by the northeastern part of auxiliary compound II was discovered during the excavation. The majority of F2 had been destroyed, leaving only the northeastern corner (Figure 2) that measured 3.4m long and 2.9m wide. A blue stone pillar base was found on each of the eastern and western ends. An east-west adobe-paved lot that

measured 2.62m long and 1.07m wide was laid on the occupation floor.

2. Material remains comprised of semi-cylindrical and flat roof tiles.

Semi-cylindrical tiles were thin and light-weighted, short-lipped, embellished with fine cord marks on the upside and dot pattern on the underside. F2:1 had a round perforation on the tile body and a stamped script “gong 宮” on the upside. F2:3 had a stamped script resembled the character “si 寺” on the upside. Flat roof tiles were thin and light-weighted, rectangular-lipped. The cut marks on the paste indicated that they were made by interior-cut method out of the original cylindrical paste. The upside of F2:2 was embellished with shallow hand-smoothed vertical coarse cord marks. A stamp with two scripts “zuosi 左司” was seen on the underside. The artifact measured 9.5cm long.

### Structures of the late phase

1. Architectural remains. The late structures comprised of perimeter walls, a main hall, auxiliary architectural groups and subsurface passages. In addition, features of well and saturation pool and remains of pipeline were also yielded (Figures 3 and 4).

The north perimeter wall of Complex VI was located in the northwestern part of the excavation zone. The wall was built with the rammed-earth. Only the foundation was preserved. The excavation brought light to a 37.71m long section of the wall. It measured 2.18m wide. The eastern end of the wall connected to auxiliary compound I, whilst its southern end interlocked with the northeastern corner of auxiliary compound II.

The main hall comprised of a raised foundation, veran-

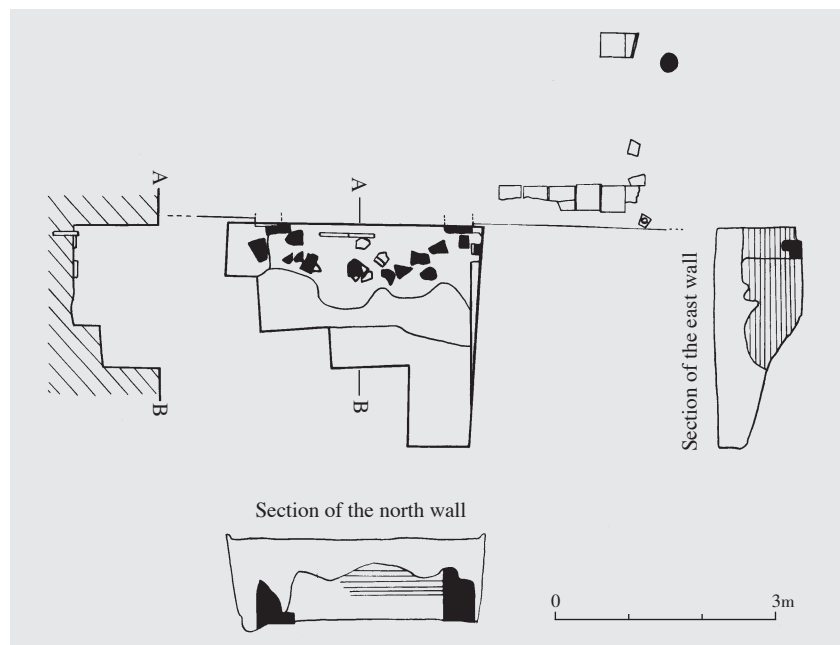


Figure 2 Plan and sections of early structure TG1, Changle Palace.

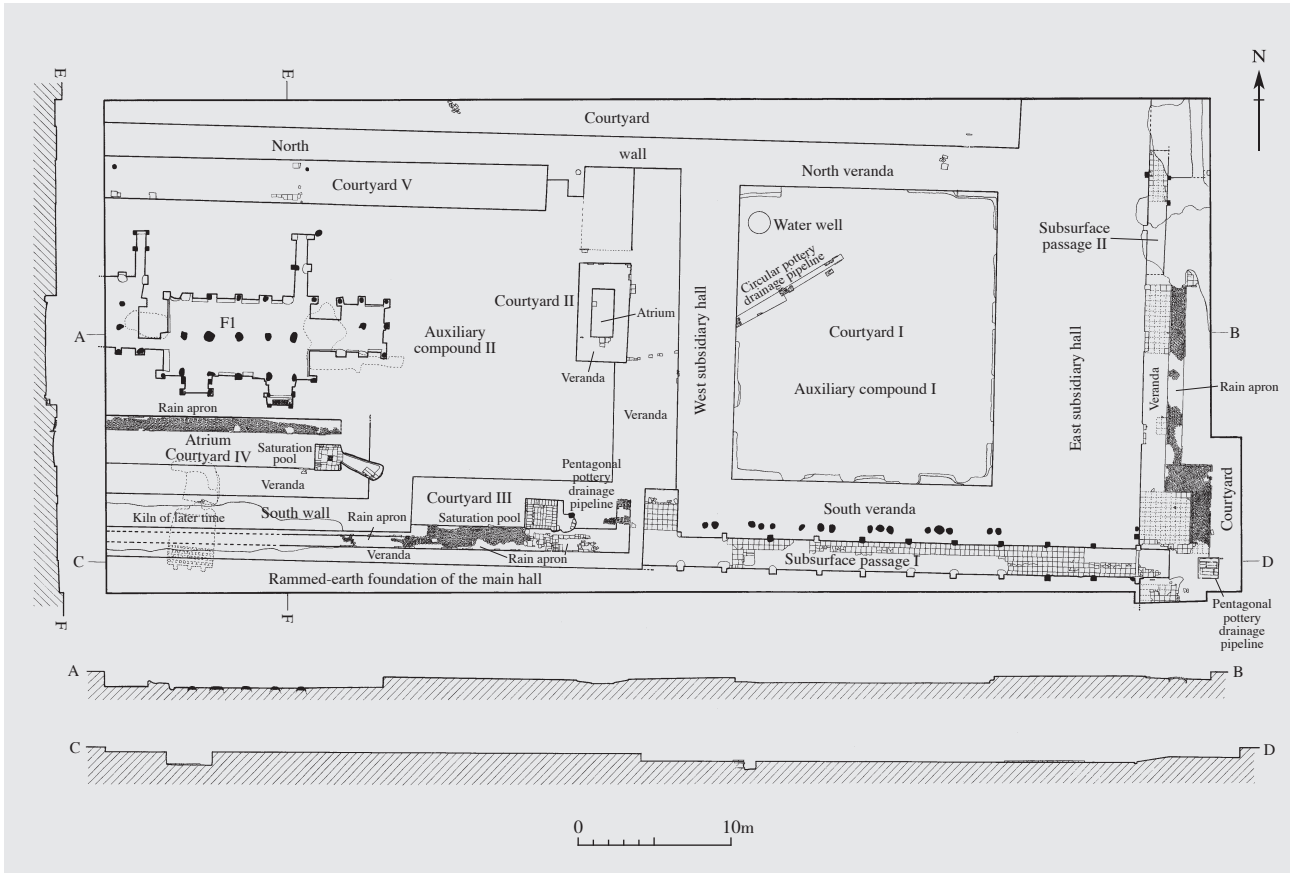


Figure 3 Plan and sections of the excavated part of architectural complex VI, Changle Palace.



Figure 4 Full-view of complex VI (top is north).

das, rain aprons, and an open-air courtyard. Coring survey suggested that the raised foundation occupied an area of about 160m long and 50m wide. It extended southward into the modern Luojiazhai Village. The excavation reported here revealed a small northern section of the raised foundation that measured 67.4m long and 0.9–2.45m wide. A small section of the eastern edge of the foundation was also revealed. The remaining eastern section had been destroyed by later occupations. The northern and eastern perimeters of the raised foundation of the main hall were enveloped by verandas. The floor of the north veranda, oriented from east to west, was lined with bricks. The excavation revealed a section of the north veranda that measured 34.15m long and 1.07–1.1m wide. Its eastern end turned north and joined the west veranda of auxiliary compound I. The east veranda of the main hall was located in the southeastern corner of the excavation zone. Constrained by the scale of excavation, only a short section of 1.15m was revealed. Yet, it was enough to show that its brick-lined floor joined that of the courtyard to its east. The rain apron was located on the north side of the north veranda of the main hall. Its eastern end followed the veranda and turned north. A shallow inflowing ditch was laid at where the rain apron joined the east saturation pool. The rain apron was built with three different lining methods and materials. The section where the apron turned north was lined with standing bricks. This part measured 3.5m long and 0.84–0.95m wide. The eastern section that measured 6.36m long and 1.5m wide was lined with flat bricks. Finally, pebbles were used on the section west of the inflowing ditch. This part measured 27.98m long and 0.78–1.51m wide. The inflowing ditch, measured 1.15m long and 0.78m wide, was lined with bricks with a gentle down gradient from south to north. The rain apron downgraded from west to east. This design allowed the runoff in the courtyard to flow eastward into the inflowing ditch and collected in the saturation pool. The courtyard situated to the east of the east veranda of the main hall. It had been heavily disturbed by a modern water channel and road surface. Two rows of east-west lining bricks were all that remained.

The discovery of two auxiliary compounds was the major findings of the excavation.

Auxiliary compound I was located in the eastern part of the excavation zone. The space of the rectangular compound was delimited by verandas on four sides. A pair of subsidiary hall structures situated on the eastern and the western halves of the compound, and the center was occupied by an open-air courtyard (courtyard I). A well (J1) and a circular pipeline were found in the central courtyard. The east subsidiary hall was indicated by the base of a raised foundation that measured 25.87m long and 9.53–9.69m wide. The east veranda and a rain apron were located to its east. A second courtyard was located beyond the rain apron; however, it had been heavily disturbed by a modern water channel and road surface; therefore, its plan was unclear. The floor of the east veranda was lined with bricks. It was partitioned into two parts by a

subsurface passage (passage II). The southern half measured 16.8m long and 1.5–3.26m wide. The northern half measured 5.08m long and 2.67–3.8m wide. Subsurface passage II consisted of a leveled path in the center and ramps on the north and the south ends. Rectangular bricks lined its floor. Its remaining length was 4.5–5.26m and its remaining width was 1.17–1.25m. The south ramp had been destroyed. The remaining height of the walls of the passage was 0.36–0.41m. Two pilasters were planted on each of the passage walls. Stone bases were recovered. The north ramp measured 1.65m long and 1.15m wide. To the east of passage II was an east-west brick sidewalk. To the immediate east of the east veranda was a pebble-lined rain apron with one row of curbing bricks on each side. The apron was partitioned into three sections. The north section measured 13.41m long and 1–1.02m wide. The middle section measured 3.27–3.3m long and 1.81m wide. Finally the south section measured 3.37m long and 1.5m wide. The apron was downgraded from west to east at 7° (Figure 5). The south veranda measured 20.74m long and 3.8m wide. Its foundation was built of rammed-earth. Six sets comprised of a total of 16 large granite pebbles were recovered from the rammed earth in the southern half of the veranda. Each of the east and the west sets had two granites pebbles; wherein the four central sets had three pebbles each. The naturally formed pebbles showed no wear and no associated baked clay nodule and ash deposit, suggesting that they were buried during the construction phase. To the north of the granite deposits laid an east-west strip of high quality rammed-earth. It was likely the remains of a wall foundation. To its north distributed the possible remains of another veranda. The west subsidiary hall was indicated by a 22.07m by 3.61–3.72m rectangular raised foundation. The west veranda was located to the west of the foundation of the west subsidiary hall. This veranda was connected to the west ramp of passage I and the north veranda of the main hall. Measured from where it met the west ramp of passage I, it was 20.92m long and 3.27–4.24m wide. Its floor was rammed and then paved with bricks. The north veranda measured 16.93m long and 2.83–2.94m wide. The rectangular central courtyard (courtyard I) measured 16.93m and 19.13–19.18m on the perimeters. Its occupation floor had been heavily disturbed. A well (J1) was found in its northwestern corner. It had a circular opening 1.4m in diameter, a flat base 1m in diameter covered with silt, and a depth of 8.3m. Its wall was lined with fan-shaped bricks laid in sections. This was very likely the remains of a water well. A double-channeled circular pipeline was found to originate from the center of the west wall of the courtyard, and extended towards the northeast. The remaining pipeline featured eight sections of pottery pipes with a total length of 4.04m.

Auxiliary compound II situated to the west of auxiliary compound I. The 33.17m by 20.47m compound comprised of a south wall, a raised foundation, four open-air courtyards (courtyard II to courtyard V) and a group of semi-subterranean dwelling features (F1). Moreover, saturation pools and pipelines were found in courtyards



**Figure 5** Rain apron and veranda foundation in the east side of auxiliary compound I (NE-SW).

III and IV. The L-shaped south wall situated in the southern periphery of the compound. A section of it in the east part was relatively well-preserved; wherein its west section had been heavily disturbed by a modern pit. The south wall measured 19.93m long and 2.1m wide. The rammed-earth of the south wall was clearly distinguishable from that of the veranda to its north. Its eastern end turned north and measured 3.66m long and 2.95m wide. The L-shaped raised foundation measured 33.17m from east to west and 17.5m from north to south. The filling earth of the foundation contained inclusions of sherds of bricks and tiles and red pigment nodules. The foundation directly superimposed over an earlier occupation floor of rammed-earth and baked clay. Courtyard II was located to the east of the raised foundation. It measured 6.41m long and 3.36m wide. It was surrounded by rain aprons on four inner sides, leaving an atrium in the center. The east apron measured 6.41m long and 1.01m wide. The south apron measured 3.36m long and 1.67m wide. The west apron measured 6.41m long and 0.91m wide. Finally, the north apron measured 3.36m long and 1.65m wide. The floors of the rain aprons were lined with rectangular plain bricks with one row of curbing bricks on each side. The floor of the courtyard gently downgraded towards the atrium. The rectangular atrium measured 3.14m long and 1.45m wide. Its paving bricks had mostly been removed. Courtyard III situated in the southeastern part of auxiliary compound II. Its rectangular plan measured 14.26m and 3.36m in perimeters. A saturation pool was located in the eastern half of the yard. The near square-shaped pool was 1.95m by 1.93m at the opening and 2.1m by 2.06m at the base, and 2.34m deep. Its walls and base were lined with rectangular bricks. The pool yielded a finely processed slat made of fine red sandstone. Its remaining dimensions were 0.7m long, 0.61m wide and 0.12m thick. The sandstone slat was likely used to cover the sediment pool. The east wall

of the pool opened to a pentagonal double-channeled pottery pipeline that ran 43.4m from east to west and went underneath subsurface passage I. Courtyard IV was located in the southwestern part of the compound. Yet, the western part of the yard was located outside of the excavation zone and therefore, part of courtyard IV was not known. The excavated part of courtyard IV measured 17.18m long and 4.2m wide and consisted of features of a well, verandas, rain apron, saturation pool and pipeline. Its center was filled with tile sherds from ruins of a structure. No paving brick was found on the atrium floor, suggesting an earthen floor. The excavated part of the courtyard measured 15.28m and 2.31m wide. Verandas lined the east and the south perimeters of the courtyard. The floors of the surround-

ing verandas were 0.15m higher than that of the yard. The south veranda was 1.89m wide and some pavement of curbing bricks and flat square bricks were found. The north-turning part of the east veranda measured 2.31m long and 1.9m wide. A pebble rain apron was found in the northern part of the yard. Its north and south edges were bordered by curbing bricks. The northern part of the apron gently downgraded towards the south. The excavated part of the apron measured 15.28m long and 0.87m wide. The west saturation pool was located in the southeastern corner of the yard. It had a square opening and straight walls lined with rectangular bricks. Its square opening measured 1.75m on each side, and 1.5m deep. The base of the pool was paved with square bricks. A pentagonal pottery pipeline originated from the east wall, ran from the northwest to the southeast and ended in the west wall of the east saturation pool. Its straight line distance was 12.38 m. The design suggested that the surface runoff of courtyard IV would first emptied into the west saturation pool, flowed into the east saturation pool through a single row pentagonal pipeline, confluence with the runoff of courtyard III, flowed through a double row pentagonal pipeline and drained outside of the compound. Courtyard V was located in the northwestern part of auxiliary compound II. Its western half distributed beyond the excavation zone. The excavated area occupied a space 28.8m by 3m. Its floor was lined with bricks. A granite pillar base was found in the northern part and the northeastern corner of the courtyard.

Feature F1 was located in the western part of auxiliary compound II. Since the western half of F1 situated outside of the excavation zone, it had not been fully revealed. The feature was a two-storied structure. Its upper story had been completely destroyed. Its lower story was a semi-subterranean structure comprising of a main room and two side rooms in the east and the west. The excavated

portion of the structure measured 18.6m long and 11.29m wide. The remaining walls were 0.53–0.73m high (Figure 6). The main room measured 9.5m and 5.43m, and its remaining walls were 0.45–0.73m high. The subsurface level of the main room featured a space shored by a pillar network. Pillars were also engaged in the walls and corners, and five pillar bases were found on the internal floor. Two rectangular doorways opened on the south wall. A hollowed brick was placed in the east doorway, functioned as a stepping stone. A vent opened on the north wall. Its leveled earthen floor was rammed and baked to reddish-brown. The floor of the upper structure was paved with square bricks. It was destroyed by fire and the ruins collapsed onto the floor of the lower structure. To the west of the main room was the west side room. Its rectangular plan measured 2.07m long and 0.71m wide. A vent was opened on the north wall. The rectangular east side room measured 2.92m long and 2.8m wide and a remaining height at 0.53–0.66m. It had a network of pillars similar to that of the main room. In between the east side room and main room was the east corridor. Its rectangular plan measured 2.69m long and 2.84m wide.

Subsurface passage I situated between the main hall and auxiliary compound I. It was a semi-subterranean passage leading into the auxiliary compound. The floor of the passage was lower than the foundations of the structures flanking it, making it a semi-subterranean L-shaped cov-

ered passageway. The walls of the passage were shored by pilasters. The passage comprised of a main leveled passage and two ramps. The whole feature was 34.29m long and 4.93m wide (Figure 7). The main passage measured 32.19m long and 1.84–1.91m wide. Both the north and south walls were reasonably well preserved. Their remaining heights were 0.53–0.6m. The rammed walls were coated with two to three layers of daub and plastered with one layer of white lime solution. Each of the north and the south walls had eleven pilasters, mirrored to each other. Several granite pillar bases had been recovered. The floor of the main passage was lined with six rows of square bricks. Underneath the main passage laid the pipeline made of two rows of pentagonal pottery pipes described above. The east ramp measured 2.18m long and 1.52–1.62m wide. It had a brick-paved floor and a trough with wood ashes on its western end, indicating the setting of a wooden door. The west ramp measured 3.12m long and 2.12m wide. Its floor was paved with seven rows of square bricks decorated with geometrical patterns on one side, with the patterned side faced up (Figure 8).

2. Material remains. Material remains comprised mainly of architectural components of semi-cylindrical tiles, flat tiles, tile-ends, bricks, and pottery pipes. It also consisted of small number of domestic potteries, iron and bronze artifacts, and bronze coins.

The architectural components comprised of semi-cy-



**Figure 6** Structure F1 (NW–SE).



Figure 7 Subsurface passage I (W-E).



Figure 8 West ramp of subsurface passage I (NE-SW).

lindrical tiles, flat tiles, tile-ends, bricks, and pipes.

Semi-cylindrical tiles. T3 ② :9, short lip, thin and light body, built with coiling method. The cut marks on the paste indicated that it was cut by exterior-cut method out of the original cylindrical paste. Its upside was embellished with fine cord marks; wherein its underside was embellished with dot pattern. The tile measured 53.4cm long and 15.8–16.8cm wide (Figure 9). T1 ③ :55, long lip, thick and heavy body. It was embellished with medium or coarse cord marks on the upside, and textile print on the underside. The artifact measured 57cm long and 8.5–8.8cm wide (Figure 10).

The tile-end assemblage comprised mainly of cloud-patterned tile-ends, followed by scripted tile-ends and plain half tile-ends.

Plain half tile-end was rare that only one specimen (T1 ② :37) was recovered during the excavation. It had a bluish-grey hue. The semi-cylindrical part was embellished with fine cord marks on the upside and dot pattern on the underside. A stamp with two characters “*dajiang* 大匠” was seen on the upside. The diameter of the circular end was 16.4cm (Figure 11).

Cloud-patterned tile-ends. Some of the cloud-patterned tile-ends were made together with semi-cylindrical tiles in one process. They showed cut marks on the backs of the ends. The end face had a circular ridge on the periphery and four evenly distributed double borderlines that did not cut into the center. The centers were embellished with patterns of oblique checker, Union Jack, persimmon calyx (quatrefoil), and nipples. T3 ② :1 was a semi-cylindrical tile embellished with hand-smoothed cord marks and the stamp with characters “*dajiang* 大匠” on the upside. It measured 17.9cm in diameter (Figure 12). Some tile-ends were independently made and attached to the semi-cylindrical tiles to assemble. This type of tile-ends did not have cut mark at their backs. The end faces were embellished with one round of ridge on the periphery and double-lined cross that joined the ridge and cut into the center, partitioning the end faces into four sectors, each embellished with one cloud pattern. The circular center was embellished with one big triangle. Specimen T1 ③ :12 was embellished with cord mark on the upside and textile print on the underside. Its face measured 18.1cm in diameter (Figure 13). Some ends had nipple pattern in the center; whilst some had the nipple pattern encircled by one ring of bead



Figure 9 Semi-cylindrical roof tile Type A (T3 ② :9).



Figure 10 Semi-cylindrical roof tile of Type BI (T1 ③ :55).

pattern. T6 ② :1 measured 19.5cm in diameter (Figure 14).

The majority of the scripted tile-end assemblage was that of the “*Changle weiyang* 长乐未央” style. One round of ridge embellished the periphery of the ends. It was then followed by double partitioning lines that did not cut into the center. The centers were embellished with one large stereoscopic nipple, two rounds of ridges and 12 to 16 small nipples in between the ridges. The scripts of “*chang* 长”, “*le* 乐”, “*wei* 未” and “*yang* 央” in seal style distributed on the four partitioned sectors of the end face. T1 ③ :10 measured 18.8cm (Figure 15).

Bricks were mold made into square, rectangle, and triangle shapes. The square bricks can be further classified into plain bricks, geometrical-patterned bricks and small checker-patterned bricks. T5 ③ :28 was a plain brick that measured 39.5cm long and 35.8cm wide. T5 ② :31 was a rectangle brick that measured 35cm long and 17.5cm wide. T5 ③ :35 was a triangle brick ground from a rectangle brick.

The pottery pipes had round and pentagonal types. T6 ③ :8 was a round pipe with a diameter of 23cm and the remaining length measured 46.5cm (Figure 16). The center of the pipe was thicker than the ends. Its outside was embellished with coarse cord marks; wherein its inside was embellished with dot pattern. T6 ② :5 was a section of pentagonal pottery pipe that measured 39cm in



Figure 11 Stamp of the plain half tile-end (T1 ② :37).

remaining length and 41cm high. Its outside was embellished with coarse cord marks (Figure 17).

The excavation yielded eight different styles of bronze coins. T2 ② :24 was an example of *yujia* 榆荚 (elm-seed or elm-pod) coin that had an irregular rim, no perimeter ridge and a small circular perforation in the center (Figure 18:1). Its diameter measured 1.3cm. T2 ③ :22, an example of *banliang* 半两, had no perimeter ridge, a square perforation in the center, the characters of “*ban*” and “*liang*” were cast in seal style flanking the square perforation. Its diameter was 2.5cm (Figure 18:4). T1 ③ :104 was an example of *wuzhu* 五铢. It had a perimeter ridge, a square perforation encased by ridges on the four sides, and a diameter of 2.65cm. The character “*wu* 五” featured two crossing straight strokes. The character “*zhu* 铢” featured a small triangle on the upper left, and the right side of the character started with a squared stroke head and rounded turn at the stroke tail (Figure 18:7). T3 ③ :21 was an example of *jianlun* (flange-cut away) coin. It had a circular overall shape, squared perforation and a diameter of 1.3cm (Figure 18:2). Characters of this coin had been cut away. T3 ② :20 was an example of *daqian wushi* 大泉五十; its diameter was 2.4cm (Figure 18:5). T1 ② :105 was an example of *buquan* 布泉 (Figure 18:3); its diameter was 2.9cm and the side length of its square perforation was 0.8cm. T2 ③ :21 was an example of *huoquan* 货泉, the diameter of which was 2.5cm. It had both outer and inner flanges, squared perforation, a thick and heavy body, and 2.5cm in diameter (Figure 18:6).

In addition, the excavation also yielded considerable





Figure 12 Cloud-patterned tile-end (T3 ② :1).



Figure 13 Cloud-patterned tile-end (T1 ③ :12).



Figure 14 Cloud-patterned tile-end (T6 ② :1).



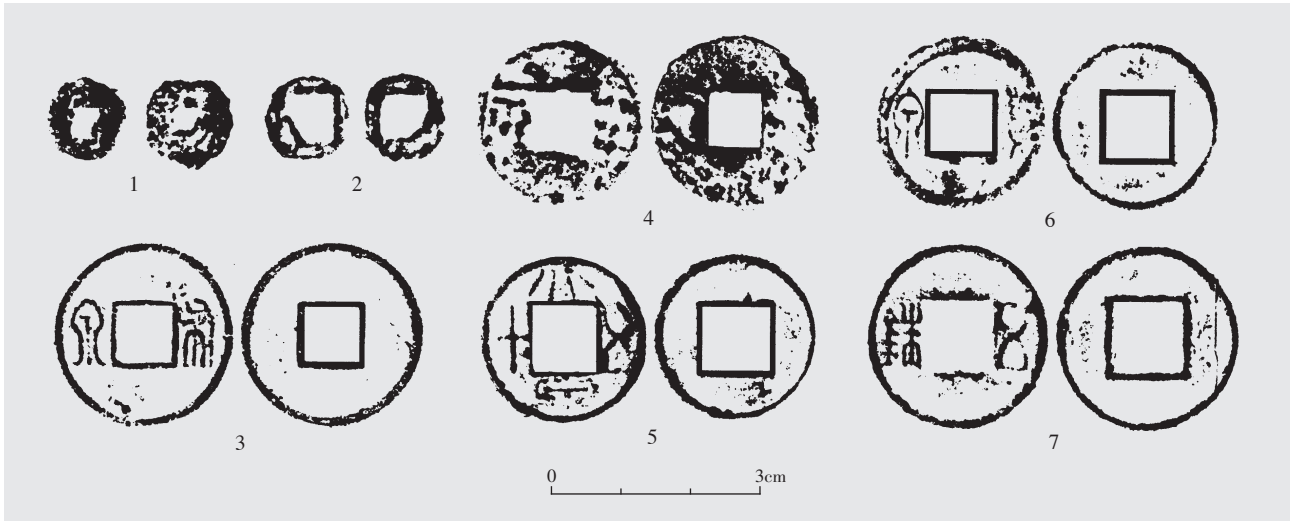
Figure 15 Tile-end with “Changle weiyang” inscription (T1 ③ :10).



Figure 16 Circular pottery pipe section (T6 ③ :8).



Figure 17 Pentagonal pottery pipe section (T6 ② :5).



**Figure 18** Unearthed bronze coins.

1. “Elm-seed” coin (T2 ② :24); 2. flange cut-away coin (T3 ③ :21); 3. *buquan* coin (T1 ② :105); 4. *banliang* coin (T2 ③ :22); 5. *daquan wushi* coin (T3 ② :20); 6. *huoquan* coin (T2 ③ :21); 7. *wuzhu* coin (T1 ③ :104)



**Figure 19** Small pottery jar (T4 ③ :18).



**Figure 20** Pottery lamp (T1 ③ :82).

quantity of domestic pottery of basins, bowls, small jars (T4 ③ :18, Figure 19), small pots, lamps (T1 ③ :82, Figure 20), vessel lids, spindle whorls, and pellets, and small quantity of iron artifacts of nails, rings and knives, and bronze artifacts of architectural components, arrowheads, cloud-patterned fittings, mirrors, armor elements, and disc-shaped plates, etc.

## Conclusions

1. Construction date of Complex VI. Historical documents suggest that Changle Palace of the Western Han was built on the site of Xingle 兴乐 Palace of Qin. Earlier structure F2, overlaid by structures of Western Han, yielded tiles and bricks stamped with scripts of “*gong* 宫 (palace)”,

“*si* 寺 (office)”, and “*zuosi* 左司 (left office).” They were consistent with the artifacts yielded from Qin sites of Xianyang 咸阳 Palace, Efang 阿房 Palace, and the royal mausoleum of Emperor Qin Shihuang. Therefore, the absolute date of F2 could be as early as Qin or Warring-States. These findings provide valuable information for the search of Xingle Palace of the Qin.

Material remains yielded from the reported excavation consisted of artifacts popular during the Qin-Han period. They included semi-cylindrical tiles with fine cord marks on the upside and dot pattern on the underside, flat tiles embellished with medium cord marks on the upside and plain on the underside, small checker pattern square bricks, plain half tile-end, cloud pattern tile-ends with fish net pattern on the center (many of them showed cut

marks on the back). Bricks and tiles with the “*dajiang* 大匠 (lit. “great master”; director of the palace building)” stamp were previously found in Qin’s royal sites of palace and mausoleum and Shanglin Park 上林苑 and Gangquan 甘泉 (Sweet Spring) Palace of the Qin-Han times. This kind of architectural components had rarely been found in the mid to late Western Han sites. These facts indicate that complex VI of Changle Palace was most likely built during the early years of Western Han. In addition, the excavation yielded considerable quantity of architectural components diagnostic to post mid-Western Han. For example, semi-cylindrical tiles and flat tiles with coarse cord mark, tile-ends with inscription of “*Changle weiyang*”, and cloud-patterned tile-ends with stereoscopic nipple motif in the center. Moreover, the recovery of bronze coins of the Wang Mang Interregnum, such as *huoquan*, *buquan* 布泉 and *daquan wushi* 大泉五十, suggests that Complex VI was continued to be occupied during the Wang Mang era. The sacking of Complex VI was possibly related to the turmoil in the Gengshi Era (23–25 CE).

2. Nature of complex VI. The architectural group of Complex VI was located in the northwestern part of the Changle Palace. In close proximity were Complex IV to its north and Complex V to its southeast, both were excavated in recent years. Complex VI and Complex IV distributed on a north-south axis with 30m between them. Complex V was 50m from Complex VI. In addi-

tion, Complex II situated to the northwest and Complex III situated to the southwest of Complex VI. Major architectural groups were densely distributed in this part of the palace site. The size of Complex VI far exceeded that of Complexes II and IV, suggesting its relatively high status. Complex VI, therefore, was most likely the most important and main architecture of the palace.

3. Water system. The water system was another major finding of the excavation. The system comprised of two saturation pools, two drainage pipelines, and rain aprons. The gradients of the rain aprons and the inflowing channels, and the heights of water inlets and water outlets were designed to effectively collect the runoff from the main hall and courtyards of the auxiliary compounds and drain it out of the building. Written documents indicate that the northeastern part of Changle Palace was occupied by the pond and garden area. This was likely to which the drainage system oriented toward.

### Postscript

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